

New Products of 1934-35

HERE is a broad view, sharply focused for the architect's working knowledge. For the third time, over intervals of some eighteen months, ARCHITECTURE presents a concise survey of the new materials, prices, accessories, or services offered for the architect's use. Among the hundreds of items brought under our lens, some will take their places as staple building necessities, others will be replaced by successive improvements. Still others will point the way to further research along the construction highroad or its tributary bypaths. It would be a rash prophet indeed who would venture to put each item at once into its ultimate category.

There is a spirit of adventure in these pages—first glimpses of things that might conceivably direct the whole course of future building, tucked away among others that make their bow and will retire in favor of something still better.

We asked the producers of building materials

throughout the United States to tell us of what they had brought into the market since February, 1934—to tell us in about fifty words what a busy architect would like to know about each item: not an advertisement, not a sales argument, not a collection of superlatives, but the unadorned facts. The editorial blue pencil has been worn to a mere stub on the results, and here they are. Naturally the descriptions are brutally short, frequently if not usually inadequate—but if they were much longer you would not read them at all, and that would be your loss. We have tacked on to the end of each a number. Wherever the fifty words fail to tell you all that you would like to know about a product, jot down the numbers on a card with your name and address, mail it to ARCHITECTURE, Service Bureau, and you shall have all the facts that are available.

The arrangement is in accordance with the filing system devised by the American Institute of Architects.

3. Masonry Materials

COLOR CEMENT. A more thoroughly processed cement that produces service strength in 24 hours. Concrete thoroughly cures if kept wet for 48 hours, producing water-tight concrete without admixtures, long-lasting floors without hardeners, and weather-resistant surfaces without protective coatings. International Cement Corp., New York City. 1

HY-TEST MASONRY CEMENT. An intimate mixture of Portland cement and hydraulic lime, both meeting A.S.T.M. requirements, into which is ground at the mill a recognized compound of a stearate base which not only water-proofs but tends to reduce shrinkage of the mortar and increases bonding efficiency between the mortar and brick. Hy-Test Cement Co., Inc., Philadelphia, Pa. 2

LEHIGH EARLY-STRENGTH PORTLAND CEMENT. A true Portland cement, handled exactly as is standard Portland. It is not "quick setting," thus permitting normal placing and finishing procedure. Bonds with and combines perfectly with standard Portlands. Provides added density. Permits early form removal, speeds job progress during all seasons. Attains normal 7-day tensile strength in 24 hours; 28-day normal in 72 hours. Lehigh Portland Cement Co., Allentown, Pa. 3

SOLVAY CALCIUM CHLORIDE. A concrete curing agent that does a complete job. Its comprehensive advantages, as established in recent studies of calcium chloride by the National Bureau of Standards and other research groups, are: 1. Proper moisture control for complete hydration. 2. Acceleration of the set. 3. Con-

trol of volume changes. 4. Increased workability. 5. Cold-weather protection. 6. Concrete of high early and ultimate strength. Solvay Sales Corporation, 40 Rector Street, New York City. 4

BLACK BRICK. A real jet-black brick made by a new method developed by this company. Color unaffected by acids, fire, alkalies, or weather. They are furnished in Ruff Texture or Smooth Face in standard size or special shapes. Auburn Shale Brick Co., Auburn, Pa. 5

TIGER BRAND BRICKMORTAR. A mill-mixed mortar rendered thoroughly plastic with hydrated lime. Aids proper bedding of masonry units, contributing to water-tight joints and avoidance of efflorescence. The Kelley Island Lime & Transport Co., Cleveland, Ohio. 6

NEW ART-ROC. For coloring, hardening, waterproofing concrete and Portland cement mortar. In five colors and colorless; a liquid added to concrete mix. Makes surface harder and free from dusting. In colors, 1

gal. per sack of cement; colorless, 1 qt. per sack. The Truscon Laboratories, Detroit, Mich. 7

RUGGEDWEAR RESURFACER. Added to concrete mixture, produces firm,

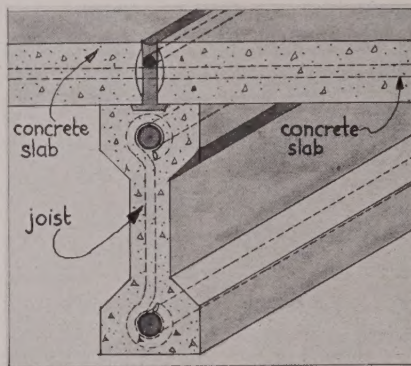
slightly mastic surface, to withstand heavy industrial traffic. For patching, may be used even to a feather edge. Flexrock Co., 800 N. Delaware Avenue, Philadelphia, Pa. 8

4. Concrete and Monolithic Construction

TWACHTMAN SYSTEM OF CONCRETE HOUSE CONSTRUCTION. A patented system utilizing precast sections approximately 16' long and of ceiling height. Interior and exterior slabs are cast integrally with concrete studs, leaving 4" air space. Frames cast integrally with wall sections. Wiring, plumbing, and heating ducts precast in the panels. Leaves outside wall as is or stuccoed or veneered. Connecticut Precast Building Corp., Greenwich, Conn. 9

PRECAST CONCRETE FLOORS. Floor slabs are laid on precast concrete joists. A system used for 113 houses

in the T. V. A. project at Norris, Tenn. Southern Cast Stone Co., Knoxville, Tenn. 10



PRECAST CONCRETE JOISTS. Joists and rafters of a standard concrete joist I-beam section, on which may be laid precast slabs 2" x 12" x 8". Kalamazoo Haydite Tile Co., Kalamazoo, Mich. 11

EARLEY PROCESS MOSAIC CONCRETE. This patented system uses precast panels, with colored aggregates, the panels 2" x 4' to 10' wide, approximately 9' high, reinforced with electrically welded steel mesh. When panels are assembled on concrete foundation, light reinforced concrete columns are cast behind them at the joints. Earley Process Corp., Washington, D. C. 12

5. Brick Work

ROBINSON LAP-LOK WALL COPING. Salt-glazed vitrified clay, for parapet walls; locks securely over the brick work; close-fitting joints;

water-tight. Unaffected by weather, fumes, or fire. Cannot rust, disintegrate, or discolor. End laps flush on top. Sizes, 9", 13", and 18", in

2-ft. lengths; also ends, starters, and right and left corners. The Robinson Clay Products Co., New York City. 13

12. Roofing, Sheet Metal and Skylights

RU-BER-OID ROLL ROOFING WITH EASON FLAPS. With the use of Eason Flaps, which are securely attached to the longitudinal edge of the roofing, the seams are made just as water-tight and secure as the body of the roofing. Thus the seam becomes a built-up roof of seven courses or plies. There are no exposed nails. This roofing can be used for either pitched or dead-level

roofs. Rolls, 36" wide, contain sufficient material for applying one square and can be supplied in five different weights. The Ruberoid Co., New York City. 14

NEW PREST-O-LITE COMBINATION OUTFITS. New 4-in-1 Outfit finds application wherever soldering, brazing, or metal heating is done. It is

particularly useful in installing sweat-type, stream-line, copper fittings for air-conditioning systems. The four stems provided with this air-acetylene torch are for fine soldering; light soldering and brazing; medium soldering, brazing, and heating; and for heavy soldering and heating. The flame is smokeless and easily controlled. The Linde Air Products Co., New York City. 15

13. Structural Steel and Iron

NEW OXWELD CUTTING BLOWPIPE. Type C-24. Designed essentially to serve as a general-duty cutting blowpipe, but capable of heavier work if necessary. It operates at a low oxygen pressure. Useful for steel-building construction and pipe installation. Features: New design, convenient oxygen cutting valve with long lever; nozzles with seat protectors; heating orifices closely

spaced about cutting oxygen opening; interchangeable large-capacity ball-type inlet needle valves; new nozzle sizes. The Linde Air Products Co., New York City. 16

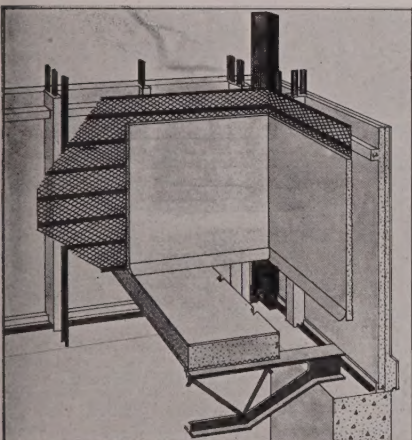
STRAN-STEEL LIGHT-GAUGE FRAMING. For penthouse construction, additions to existing buildings, rigid interior partitioning, etc. Rapidly erected by carpenters. Metal screws;

other materials attached with wire nails. Also for fire-safe residence construction with concrete subfloors. Stran-Steel Corp., Detroit, Mich. 17

PUROX GENERAL-DUTY WELDING TORCH. No. 35. Useful for modernization work as well as for the installation of new oxwelded piping systems. Constructed of extruded

brass, Monel metal, and drawn copper, and with silver-soldered tubes, this torch can withstand rough treatment and do light or heavy work. It is listed by Underwriters' Laboratories, Inc. The Linde Air Products Co., New York City. 18

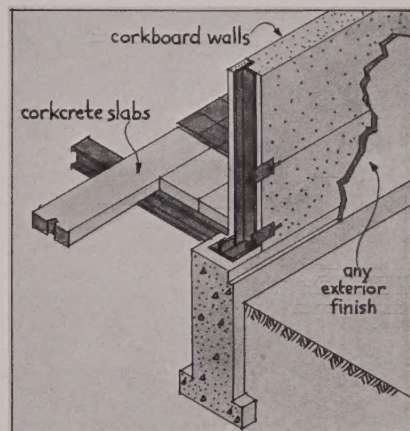
LURIE STEEL HOUSE CONSTRUCTION. Patent pending. Consists of a 2" non-bearing ribbed concrete plaster or gunite envelope, 3" thick at ribs, reinforced vertically



and horizontally with pairs of 3/4" plastering channels, approximately 32" o. c., and galvanized expanded metal lath, the channels and lath being completely embedded; attached to and supported by a structural frame of steel or concrete which takes the dead and live loads, and a separate inside metal lath and plaster wall attached to the outer envelope by separators, to form a continuous hollow space around the building, providing for pipe space, insulation and air conditioning. The building is fireproof; the construction is applicable not only to dwellings, but school houses, churches, apartment buildings, etc. Sponsored by Metal Lath Mfrs.' Association, 208 So. La Salle Street, Chicago, Ill. 19

INSPECTION, TESTS, CONSULTATION. Mill, shop, and field inspection of structural steel; inspection and tests of reinforcing steel and cement; design of concrete mix and crushing tests; field tests and supervision of concrete; laboratory work. Robert W. Hunt Co., Engineers, 175 W. Jackson Blvd., Chicago, Ill. 20

CORKANSTEEL CONSTRUCTION. Suitable for residential, public, and industrial uses. It consists of a heavy steel frame, all rolled sections, with walls of 3" corkboard, fitted and secured to the steel frame, which is buried in the cork. Floors and roof consist of Corkcrete slabs, soundproof and fireproof; partitions of the same material. Exterior finish is either stucco or brick veneer; the interior, plastic paint or the usual plaster. Corkanstele Co., 270 Madison Avenue, New York City. 21



14. Miscellaneous Steel and Iron

PERFECT DIAMOND PATTERN ROLLED STEEL FLOOR PLATE. Originators of the "Raised Diamond" pattern of rolled-steel plate, made thirty-six

years ago, have perfected a new method of rolling which gives shorter diamond projections in all standard

gauges and sizes, with increased resistance against slipping. American Pressed Steel Co., Commercial Trust Bldg., Pittsburgh, Pa. 22

15. Ornamental Metal Work

BOHNALITE EXTRUDED ALUMINUM. One-piece hollow shapes, other than round. A new development of extruding, by which is maintained a concentric wall thickness. Appli-

cations: doors, window sash, screen frames, or wherever a hollow tubular shape is needed. Bohn Aluminum and Brass Mfg. Co., Detroit, Mich. 23

WROUGHT IRON. Plates from which

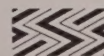
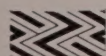
fine hand-forged hardware is being made by American craftsmen conform to A. S. T. M. specification A 42-34 T. A. M. Byers Co., Pittsburgh, Pa. 24

16. Fire-resisting Doors, Windows and Trim

LIGHT SEALAIR ALUMINUM OR BRONZE DOUBLE-HUNG WINDOW. A metal window for residential use, accurately fitted, weather-tight, easily operated in all weathers. Dustproof, rainproof, rattle-proof. Assembled at factory for quick installation in new or old houses. The Kawneer Co., Niles, Mich. 25

HOPE'S STANDARD STEEL WINDOWS WITH HORIZONTAL MUNTINS. Light section type, designed for homes where first cost is of paramount importance. They are hung on friction hinges and are prepared to receive inswinging screens. Fire-resisting pressed steel casings are recommended and are offered as standard attachments instead of and at a saving over trim and plaster reveals. Hope Windows, Inc., Jamestown, N. Y. 26

FIRESHIELD DOOR. A new 16-ga. hollow steel tube door, in single- and double-swinging types. For stairway entrances, service halls, etc., where a non-labelled metal-clad door is suitable. Shipped complete with frames and door leaves mortised. Detroit Steel Products Co., Detroit, Mich. 27

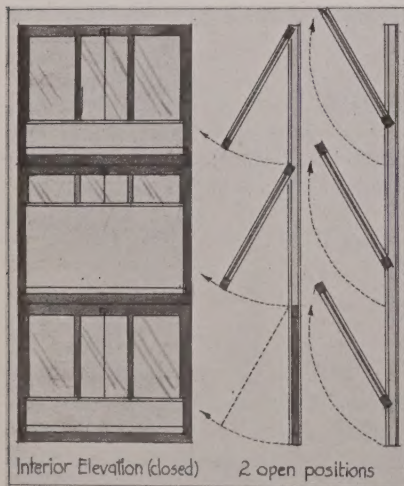


17. Special Doors and Windows

DALMO FENMARK WINDOW. A new Fenestra window, the ventilators of which all open simultaneously, after which the sill ventilator may be closed independently. No clutches or levers; mechanism concealed. For schools, hospitals, offices. Detroit Steel Products Co., Detroit, Mich. 28

CORNELL OVERHEAD DOORS. Tubular steel frames, welded and ground with rolled steel moldings to retain sheet-steel panels and glass. Float overhead type, counterbalanced by heavy springs in an overhead pipe shaft. Sections about 2' high. Open vertically, turn 90 degrees just above lintel. Cornell Iron Works, Inc., 3620 13th Street, Long Island City, N. Y. 29

DALMO-PINE CRAFT AWNING-TYPE WINDOWS. Awning or projected type wood windows for schools, hospitals, office buildings, etc., with au-

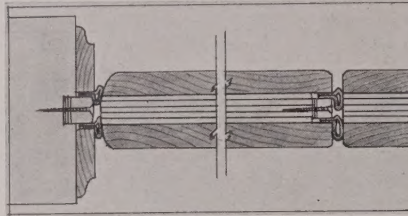


tomatic release and reconnection of sash. In 3-sash units the lowest automatically disconnects for independent operation. No exposed clutches. In stock or special sizes. Shades may roll from bottom of each sash. White Pine Sash Co., Spokane, Wash. 30

EVANSTON HIGH-DUTY DOOR. Designed for the more exacting acoustical situations, like radio broadcasting studios and testing-rooms. The internal space is 1 1/4 in., occupied by sheet steel, sheet lead and asbestos millboard, all in varying weights and thicknesses. Door

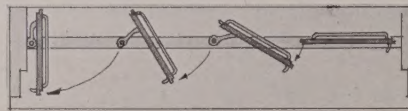
weighs 15.6 lbs. per sq. ft., or heavier if desired. Evanston Sound-proof Door Co., 1500 Lincoln Street, Evanston, Ill. 31

EVANSTON SOUND-PROOF DOOR. In a new free-swinging auditorium entrance door. Either single or double wing; all cracks well sealed; thick



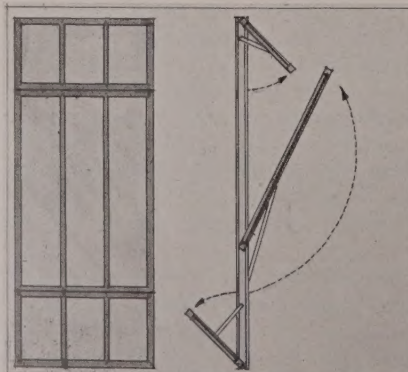
and heavy, well armed internally with materials that are sound retarding and fire retarding (steel and asbestos). Permit usual panic exit devices. Evanston Sound-proof Door Co., 1500 Lincoln Street, Evanston, Ill. 32

ELLISON BALANCED DOOR. An entrance door designed for easy opening against strong wind pressure and suction. Can be opened by a child, regardless of weight of door or wind conditions. Facilitates the handling



of large crowds, and the fast closing minimizes heat losses. Made in metal only and sold as a complete unit with frame, threshold, and all hardware. (Patented.) Ellison Bronze Co., Inc., Jamestown, N. Y. 33

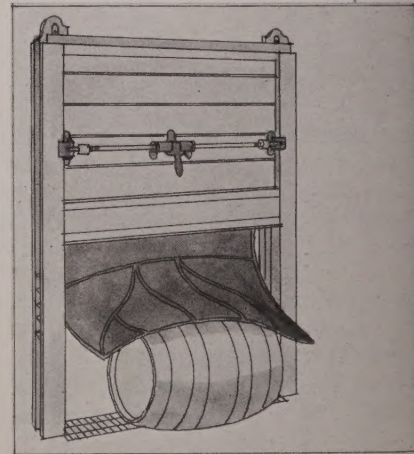
NEW DALMO SAWYER DESIGN COMBINATION WINDOW. Combines advantages of awning type and pro-



jected windows. Greater security against intrusion. Lower sash is manual of operation, hinged at bottom, opens up and in. Center sash of projected type operated independently. Upper sash hinged at top to open down and out in unison with lower sash. Dalmo Sales Corp., San Francisco, Calif. 34

ST. LOUIS ELECTRIC OPERATOR FOR SWING, SLIDE, AND FOUR-FOLD DOORS. The operators are adaptable for doors for openings of all descriptions. The operating unit mounts immediately above the lintel, requires exceedingly shallow head room and is completely simple. A standard motor, time relay for closing, instantaneous stopping when an obstruction is met, and any number of pushbutton stations are featured. St. Louis Fire Door Co., St. Louis, Mo. 35

JAMISON KEG-PASSING DOOR. For brewery use: a new version of the



vertical sliding door with keg-passing vestibule. All-steel frame; lightweight, flexible composition curtain; simplified concentric fastener. Jamison Cold Storage Door Co., Hagerstown, Md. 36

DURABILT OVERHEAD METAL DOORS. A safety door, because of its compression-spring counterbalance. Has a positive closing device which seals the opening—metal weatherstrips at top and sides, with a rubber astragal at bottom of door. Head clearance, 6"; side clearance, 6" one side; min. width of center post, 6". Durabilt Steel Locker Co., 562 Arnold Avenue, Aurora, Ill. 37

CORNELL ROLLING GRILLES. Made up of $\frac{5}{8}$ " rods connected by alternate links. For bars and counters, and motor-driven for large overhead

door substitutes. In black steel, galvanized steel, aluminum bronze,

and stainless steel. Sliding bolts on bottom bar angles, with padlocks. Cornell Iron Works, Inc., 6320 13th Street, Long Island City, N. Y. 38

19. Carpentry

UNIT ARCHES. Glued, laminated wood roof structure. Three-hinged arch frames, which replace all types of trusses and their supports, providing unobstructed spans. Prefabricated of thin laminæ, gracefully curved, and glued under high pressure. Possess unusual beauty and high rigidity; and produce great savings through elimination of waste overhead space necessary with trusses, and through reduction in height of building walls. Unit Structures, Inc., Peshtigo, Wis. 39

WEYERHAUSER 4-SQUARE END-MATCHED LUMBER. The principle of end-matched flooring in bundles of random lengths as carried into the soft-wood fields of sheathing, siding, roof boarding, sub-flooring, flooring, ceiling. The waste is cut out at the mill. Weyerhaeuser Sales Co., St. Paul, Minn. 40

ETERNIT TIMBERTEX ASBESTOS-CEMENT SHINGLES. A fireproof, asbestos-cement shingle, 8" x 16", with a textured surface that reproduces faithfully the texture of weather-aged cypress. Available in popular "wood" colors, they are equally adaptable for re-roofing over old shingles or for new work. 260 shingles per square; weight, approximately 525 lbs. per square. Exposure, 8" x 7". The Ruberoid Co., New York City. 41

JOHNS-MANVILLE CEDARGRAIN ASBESTOS SIDING SHINGLES. Through faithful reproduction of grain and texture, provide the beauty and charm of the weathered cedar shingles of the Colonial New England homestead. Made of asbestos cement, they are fireproof and permanent and require no maintenance. Johns-Manville, 22 East 40th Street, New York City. 42

RU-BER-OID THICK-BUTT STRIP SHINGLE. This shingle differs from the ordinary asphalt shingle in that the exposed butts have two additional layers of coating and mineral surfacing, thereby providing extra protection where it is needed most. It is produced in several colors and

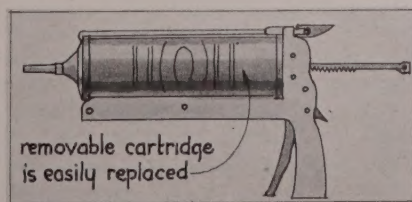
harmonious color blends. Size of strips, 12" x 36"—eighty strips per square. Approximate weight, 225 lbs. The Ruberoid Co., New York City. 43

TAPERED SHINGLES. A 4-in-1 strip shingle of the asphalt type. Tapered to give thickness at butt double that of standard asphalt shingles. Gives extra protection where it is needed. Furnished in colors and blends. United States Gypsum Co., Chicago, Ill. 44

TIMBERTEX THATCH ASBESTOS CEMENT SIDING. This 12" x 24" siding shingle, with its cypress-like texture and irregular butt line, reproduces the appearance of a hand-split wooden shingle applied in "thatch" method. It is designed for application right over wood shingle, clapboard or stucco side walls, or for new work right over the board sheathing. Its application over old siding increases the insulation value of the walls, due to the "dead" air space between the old siding and the new. The Ruberoid Co., New York City. 45

ANDERSON COMPLETE BASEMENT WINDOW. A new wood basement window furnished as a complete unit, including frame, sash, screen, and hardware—ready for use with sash and screen fitted and hardware applied. Made of clear pine with all parts primed with Alcoa aluminum paint before assembly. Complete unit individually carton-packed. Anderson Frame Corp., Bayport, Minn. 46

PECORA HIGH-PRESSURE CARTRIDGE CALKING GUN. Employs filled cartridges of compound placed in a simple trigger-action plunger gun. Saves time and material over the old hand-filled suction-gun method.



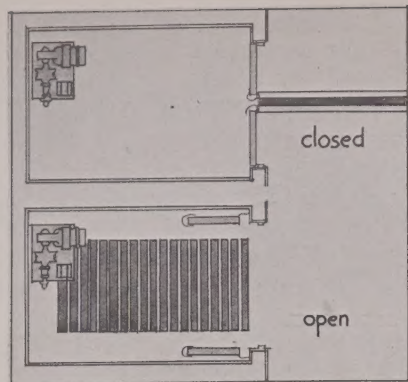
Light enough to operate with one hand. Pecora Paint Co., Third Street and Ledgley Avenue, Philadelphia, Pa. 47

TRUSCON CAULKING COMPOUND. For around window frames, door frames or in mortar joints. Stainless; remains elastic; excellent adhesion. Supplied in knife or gun consistency. Color, natural gray. The Truscon Laboratories, Detroit, Mich. 48

BAKELITE LAMINATED. New bakelite laminated sheets in a variety of colors and color combinations are available for wall panelling, baseboards, desk and table tops, etc. Two or more colors can be incorporated in a single sheet. This same material may be combined with inlays of metal or contrasting colors pressed into the surface. Permanent finish, unaffected by alcohols, alkalies, or common acids. Easily cleaned. Bakelite Corp., Bound Brook, N. J. 49

BLISTER-PROOF MICARTA. Made by molding a thin metal sheet directly beneath the surface of the Micarta plate, which acts as a rapid conductor of heat, preventing high concentrations of same in local spots, which might otherwise cause blistering of the material. Suitable for applications as bar, counter, and table tops, or any other surface likely to come in contact with lighted cigarettes and cigars. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 50

R-W AUTOMATIC ELECTRIC FOLDER-WAY PARTITION. For use in large openings, as found in school gymnasiums. The principle of operation simplifies the control to a mere turning of the key in the key-control switch on the side wall. Completely eliminates the human element by providing electrical equipment which automatically performs all the following functions: opening, closing, locking, unlocking, sound-proofing, pressure sealing of clearance at floor, etc. All operating equipment is entirely concealed, making partition

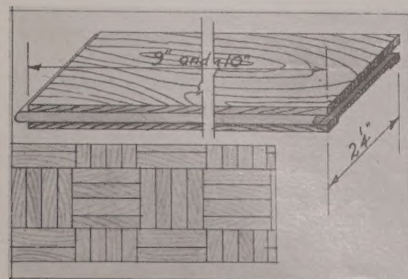


both tamper-proof and fool-proof. Richards-Wilcox Mfg. Co., Aurora, Ill. 51

BRUCE NAIL BLOCK FLOORS. Blocks for patterned hardwood flooring; laid, blind-nailed, by any good carpenter. If specified, completely finished at factory with a lustrous, lasting wax finish. Slightly bevelled edges. E. L. Bruce Co., Memphis, Tenn. 52

CHARTER OAK FACTORY-FINISHED FLOORS. An oak floor completely finished at the factory with a very durable, long-wearing finish. The finish, consisting of a sealer and a heavy waxy compound, is fused with the wood under extreme pressure and high temperature. The sealer is also an excellent moisture resistant. Available in two colors: a golden brown, made in $1\frac{1}{2}$ " width only; and a nut brown, made in both $1\frac{1}{2}$ " and 2" widths. All three are $\frac{3}{8}$ " thick. The Cromar Co., Williamsport, Pa. 53

CORNER-LOCK BLOCK-DESIGN FLOORING. Built up, as installed, of three or four matched members to the block. Meeting corners overlap. Each piece end-sealed against absorption and provided with nail seat. Blocks, $9'' \times 9''$ and $9'' \times 10''$. Thickness, $\frac{3}{8}''$. White oak, red oak, and beech. Special system enables quick laying in mastic or blind-nailed. Bradley Lumber Co., of Arkansas, Warren, Ark. 54



STANDARD DUALBOARD. The selected wood fibers are thoroughly felted together and pressed into board form in steam-heated, flat-bed hydraulic presses. Available in $\frac{1}{4}''$ thickness only. The Insulite Co., Minneapolis, Minn. 55

DELUXE DUALBOARD. An ingenious refinement in the technique of manufacturing Standard Dualboard permits the production of this Deluxe product, which has a smooth, hard surface. Comes in $\frac{1}{4}''$ thickness only. The Insulite Co., Minneapolis, Minn. 56

INSULITE HARDBOARD. With a considerable increase in the amount of pressure applied in the hydraulic press and a definitely controlled amount of heat, this higher-density HardBoard is produced in five thicknesses: $\frac{1}{16}''$, $\frac{1}{8}''$, $\frac{3}{16}''$, $\frac{1}{4}''$, $\frac{5}{16}''$. The Insulite Co., Minneapolis, Minn. 57

WEATHERWOOD STRUCTOBOARD. A companion product to U. S. G. hard board, but furnished only in $\frac{1}{4}''$ thickness. Used where a hard, dense, easily decorated board is indicated. United States Gypsum Co., Chicago, Ill. 58

INSULITE TEMPERED HARDBOARD. In addition to the application of heat and pressure to the natural wood fibers, as in the manufacture of DualBoard and HardBoard products, a special tempering process has been evolved, consisting of treatment of the material with liquids and additional heat. By tensile and transverse strength, hardness and resistance to abrasion of the material are increased. Five thicknesses: $\frac{1}{16}''$, $\frac{1}{8}''$, $\frac{3}{16}''$, $\frac{1}{4}''$, $\frac{5}{16}''$. The Insulite Co., Minneapolis, Minn. 59

JOHNS-MANVILLE HARD BOARD. An all-wood fiber board product of unusual density, strength, and toughness. It has a smooth surface, pleasing color, and, in its natural state, provides a mottled or burl effect. It can be painted, stained, varnished, or waxed in the same manner as wood. J-M Hard Board has almost countless applications—for paneling walls and ceilings, for partitions, for displays, and for practically every household article that can be made of wood. It can also be used outdoors. Johns-Manville, 22 East 40th Street, New York City. 60

JOHNS-MANVILLE ASBESTOS FLEX-BOARD. A colorful, fireproof, permanent asbestos-cement sheet which is actually flexible; it can be sawed and nailed like wood, and is easily and quickly applied. The color is an integral part of the material and cannot crack or chip off. Furnished in four pastel shades of green, buff, rose, and slate; in two styles, Decorative (scored, $4' \times 4' \times \frac{1}{8}''$; plain, $4' \times 8' \times \frac{1}{8}''$) and Standard (buff only, $4' \times 8' \times \frac{1}{8}''$, $\frac{1}{8}''$, and $\frac{3}{16}''$). Johns-Manville, 22 East 40th Street, New York City. 61

WEATHERWOOD DENSBOARD. A hard board for all wall-board uses. Furnished in $\frac{1}{4}''$ thickness only. Can be used decorated or undecorated. United States Gypsum Co., Chicago, Ill. 62

WEATHERWOOD HARD BOARD. Hard board in $\frac{1}{8}''$, $\frac{3}{16}''$, and $\frac{1}{4}''$ thicknesses. Has two finished surfaces. Can be cut, sanded, glued, and nailed. Can be decorated with paint, lacquer, or enamel. Used where thin durable board is needed. United States Gypsum Co., Chicago, Ill. 63

ORNAMETL. A new panel for wall treatment consists of thin veneer, $\frac{1}{8}''$ or less in thickness, firmly cemented to a suitable gauge of sheet steel. Any type of veneer face may be specified—fancy hardwood veneers for decorative finishes, or plain poplar or birch for painting. Combines the structural strength and fire resistance of sheet steel with the decorative beauty of natural wood. Available in sheet form of room height. Haskelite Mfg. Corp., 208 W. Washington Street, Chicago, Ill. 64

BLACK TEMPERED HARDBOARD. Manufacture and physical characteristics are similar to those of Tempered HardBoard. The dark color results from the application of a dye during the tempering process, which produces a uniform dark slate color over the entire smooth surface of the board. Thicknesses: $\frac{1}{16}''$, $\frac{1}{8}''$, $\frac{3}{16}''$, $\frac{1}{4}''$, $\frac{5}{16}''$. The Insulite Co., Minneapolis, Minn. 65

JOHNS-MANVILLE TRANSITE WALLS. Asbestos-cement panels which are installed by attaching to light-weight steel studs; allow for quick, easy erection of partitions which can be taken down or changed with complete salvageability of materials and

without long waits for drying of damp materials. The walls are fire-proof, with good soundproof qual-

ities, great strength, rigidity, and permanence. The surface can be

painted or finished as desired. Johns-Manville, 22 East 40th Street, New York City. 66

20. Furring and Lathing

MILCOR STEELKRAFT PLASTER BASE. A combination of a special heavy paper backing wire-stapled to any

type of Milcor metal lath. Sheet size, 24" x 96". Paper backing a combination of waterproof paper and

absorbent paper with asphalt between. Milcor Steel Co., Milwaukee, Wis. 67

RED TOP PLASTER. An improved process produces a gypsum wall plaster that has the same set under varying job conditions and assures better plastering. Covered by a 10-point guarantee. Patented. United States Gypsum Co., Chicago, Ill. 68

21. Plastering

FINISHING HYDRATED LIME. Tiger Brand. Used for the final white coat of plaster. Either a smooth white surface, antique, or textured sur-

faces, in a range limited only by the architect's imagination and plasterer's skill, may be obtained. Being pure white, it lends itself to ready acceptance of any decorative scheme. The Kelley Island Lime & Transport Co., Cleveland, Ohio. 69

22. Marble, Slate, Soapstone, Bluestone, Terrazzo, Structural Glass

KIMBLE GLASS BARS. A new stock rod or bar in various sizes for balusters, lighting fixtures, hand rails, door pulls, window grilles, store shelving and display stands, etc. Kimble Glass Co., Vineland, N. J. 70

CORNING-STEUBEN ARCHITECTURAL GLASS. A new medium for architectural decoration, manufactured both in the Crystal and Pyrex Brand glasses. Latter for exterior locations of wide and sudden temperature changes. Stock moldings available; special designs executed. Corning Glass Works, Corning, N. Y. 71

NEWMARBLE. Asbestos panels simulating marble. A rigid asbestos-cement panel with graining and a lustrous finish that simulates mar-

ble. It can be quickly installed with ordinary carpenter's tools. Adaptable for use in modernizing apartment-house foyers, theatre lobbies, hallways, etc. Sheets are 32" x 48" by $\frac{3}{16}$ " thick. Colors: Black and gold, French black and white, African black and white, Verde antique, light Italian, Spanish rose, and Chinese red. Base pieces, 6" x 48", and cap pieces, 4" x 48", rabbetted on one side to fit sheets furnished to match. The Ruberoid Co., New York City. 72

VITROLITE NEW COLORS. Structural glass for exterior or interior facings, etc., now available in Robin Blue, Tropic Green, and Yellow—with a total of 15 colors. The Vitrolite Co., Chicago, Ill. 73

INSULUX. A new glass building block with a hollow center. Made by cementing two half blocks together with a metal composition, producing a block hermetically sealed at a temperature of approximately 1000° F. Rarified air in the center of the block, approaching a vacuum, gives insulation value. Available at present in two standard sizes: No. 101 Oblong Standard Ribbed Face Surface, $4\frac{5}{8}$ " x 8" x $3\frac{7}{8}$ "; weight, 4 lbs. No. 201 Square Standard Ribbed Face Surface, $5\frac{3}{4}$ " x $5\frac{3}{4}$ " x $3\frac{7}{8}$ ", weight, $3\frac{1}{2}$ lbs. Color, light green glass. Mortar-bearing surfaces treated with special gritty composition to provide adhesion between mortar and the block. Owens-Illinois Glass Co., Toledo, Ohio. 74

23. Floor and Wall Tile, Linoleum and Accessories

ARMSTRONG'S ACCOFLOR. A new low-cost, general utility floor covering, consisting of a special facing mix keyed to a felt back. Available in "feather-grained" green, brown, or taupe, it was developed especially for low-cost or temporary installations in stores, restaurants, hotels, display rooms, kitchens, baths, halls, and summer cottages. Armstrong Cork Products Co., Lancaster, Pa. 75

AZROCK INDUSTRIAL TILE. Asphalt impregnated, cotton fiber, heavy-duty floor covering for manufacturing plants, warehouses, schools,

basements, trucking aisles. In two dark plain and textured colors, 12" x 12" and 12" x 24". Uvalde Rock Asphalt Co., San Antonio, Texas. 76

AZROCK TEXTURED PLANK. For long-life use in halls and corridors. With more resilience than Azrock floor tile and carpet tile, it is suited to space not subjected to the weight of standing loads. Size, 12" x 12" and 12" x 24" in one dark textured color and plain black. Uvalde Rock Asphalt Co., San Antonio, Texas. 77

JOHNS-MANVILLE HEAVY-DUTY ASPHALT TILE FLOORING. Recom-

mended for unusually severe service conditions, such as are encountered in school corridors, stores, public buildings, car and bus floors, etc. Outstanding characteristics are its resistance to indentation, its great strength, and its ability to withstand exposure to moisture. Furnished in four attractive colors—red, mahogany, brown, and black—and in several marbleized designs; in $\frac{1}{4}$ " thickness and in sizes 9" x 9", 9" x 18", 12" x 12", and 12" x 24". Heavy-Duty Tile can be applied directly over smooth wood sub-floors. Johns-Manville, 22 East 40th Street, New York City. 78

HOMASOTE RESTFUL FLOORING. A resilient flooring, linoleum or rubber topped, with a cushion base made of specially treated Homasote weather-proof structural insulating board. The top covering and base are firmly cemented together, and the individual panels are made in widths of 1', 2', and 3', and in lengths of 8', 9', 10', 12', and 14'. Border width is 17". The product is laid directly over the rough sub-flooring and combines a finished floor, floor covering, insulation, and sound deadening. In two thicknesses: $\frac{1}{2}$ " for use over old or concrete floors, and $\frac{3}{8}$ " for new work. The method of laying makes the floor dust-proof and draught-proof. The Agasote Millboard Co., Trenton, N. J. 79

STEDMAN $\frac{1}{8}$ " REINFORCED RUBBER TILE. Designed to place the recognized advantages of rubber tile flooring within the reach of reduced budgets. It is made, laid and guaranteed like the $\frac{3}{16}$ " and $\frac{1}{4}$ " gauges and is available in the same colors and sizes. A homogeneous tile notable for its density, beauty and economy. Stedman Rubber Flooring Co., South Braintree, Mass. 80

TRAFFIC-PROOF RUBBER TILING. Available in both sheet and individual block form. This new finish, which seals the pores of the rubber, produces a permanent, bright surface which repels dirt—as a result far less maintenance is necessary. A distinct improvement over the commercial types of rubber flooring. Hamilton Rubber Mfg. Co., Trenton, N. J. 81

ARMSTRONG'S FLOOR CLEANER is announced for safe cleaning of linoleum, Linotile, cork tile, rubber tile, asphalt tile, felt-base floor coverings, walls, woodwork, and metal furniture. It is a neutral liquid and contains no abrasives. Eliminating the injurious effects of soaps containing free alkali, alkaline salts,

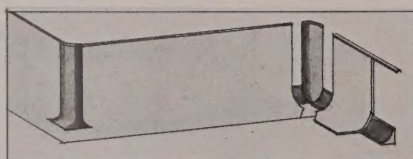
and abrasives, it can be used undiluted or mixed with warm water. Armstrong Cork Products Co., Lancaster, Pa. 82

ARMSTRONG'S LINOGLOSS WAX is a wear-resistant water-emulsion wax for linoleum, Linotile, asphalt tile, rubber tile, felt-base floor coverings, and wood floors. It is crystal clear and takes a rich luster; resists water-spotting and freezing; spreads easily; is not brittle or flaky; and leaves no odor. It can be applied over old wax, and traffic marks can be repaired by buffing. Armstrong Cork Products Co., Lancaster, Pa. 83

ARMSTRONG'S RUSTPROOF CEMENT No 210—has been developed for the installation of Linotile, cork tile, and rubber tile on metallic surfaces, such as ship decks and library stacks. Armstrong Cork Products Co., Lancaster, Pa. 84

STEDMAN REINFORCED COVE BASE. A light-weight, low-priced rubber cove base, in plain black only. Designed for use with flooring of rubber, linoleum, and asphalt tile. Height, 6"; thickness, $\frac{5}{16}$ "; cove radius, $\frac{1}{2}$ "; length, 24"; with angles and ends; to meet floors of $\frac{1}{8}$ ", $\frac{3}{16}$ " and $\frac{1}{4}$ " thickness. Stedman Rubber Flooring Co., South Braintree, Mass. 85

ARMSTRONG'S FLASH TYPE LINOLEUM COVE AND BASE. Eliminates seams close to the wall line and provides a sanitary, curved intersection of wall and floor. It consists of a wax fillet strip; a metal binding strip; concave and convex metal corners; and sufficient linoleum in any pattern of $\frac{1}{8}$ -inch gauge or less.



24. Plastic Flooring

FLEXROCK. Composition flooring shipped in 500-lb. barrels in raw form. Appearance of light concrete.

Flexibility of wood. Accepts vibration as a new surfacing over old wood floors. Color cement pigment

Armstrong Cork Products Co., Lancaster, Pa. 86

ARMSTRONG'S FORMED METAL CORNERS—for use with Armstrong's Linowall Metal Cap Strip—simplify installation and improve appearance. Inside and outside corners are available in brown, black, ivory, buff, green, orchid, blue, and chromium finish, to match the colors of the Linowall Metal Cap Strip. Armstrong Cork Products Co., Lancaster, Pa. 87

NEWTILE. Asbestos tiling in sheet form. A companion product to Newmarble; is also furnished in strong rigid sheets, 32" x 48" by $\frac{3}{16}$ " thick, and is finished with a highly polished surface which is both moisture- and fire-proof. Scoring at 4" intervals reproduces the effect of 4" square tiles. Colors: White, green, cream, blue, black, red, and Spanish. Furnished with base pieces 4" x 48", $\frac{3}{8}$ " thick, and cap pieces 2" x 48" in colors to match or for effective contrasts. The Ruberoid Co., New York City. 87

PANELTILE. The manufacture of this product is identical with that described for Tempered HardBoard, but has a surface marked off in 4" squares, grooved into the board during production. Thickness: $\frac{1}{8}$ " or $\frac{3}{16}$ ". The Insulite Co., Minneapolis, Minn. 89

ARMSTRONG'S TEMCOUSTIC "50" is a low-priced textured acoustical tile, $\frac{7}{8}$ " thick, with sound-absorption coefficient (Acoustical Materials Assn.) of 55 per cent at 512. It is supplied painted in white (light reflection 86.9 per cent), ivory (79.9 per cent), or buff (67.8 per cent); and is a good heat insulator (thermal conductivity is .31 B.t.u. per sq. ft., per deg. F., per hr., per in. thickness). Installed by cementing. Armstrong Cork Products Co., Lancaster, Pa. 90

25. Paint, Painting and Finishing

TUNGSEAL PENETRATING FLOOR FINISH. A protective coating for wood floors, meeting U. S. Govern-

ment specification No. 793 for a floor oil. Apply with brush, mop or spray. Dries, two to four hours.

Free from grease, oils and wax. Wax appearance but not slippery. Water-proof; no water spotting. Will not

discolor lightest maple. McClosky Varnish Co., Philadelphia, Pa. 92

ALCHEMIK "A." A high-luster, quick-drying, clear finish for wood floors and linoleum. Greater toughness and durability than varnish. Alcohol-resistant, soap, and hot-waterproof. Used also on furniture and standing woodwork. The Truscon Laboratories, Detroit, Mich. 93

C-A WOOD PRESERVER (Carbolinum America). A particularly toxic and stable carbolinum for brushing, spraying, dipping or soaking timbers as protection against termites. Where creosotes evaporated 22-57 per cent, C-A evaporated 0.3 per cent. Has 87 per cent anthracene oil at 300° C. C-A Wood Preserver Co., 6625 Delmar Blvd., St. Louis, Mo. 94

No-D-K. A highly concentrated hardwood oil for protection of wood against rot and boring insects—particularly termites. Applied by brushing, spraying, or dipping. Unusual depth of penetration; not readily driven off by hot sun; insoluble in water. Tennessee Eastman Corp., Kingsport, Tenn. 95

TRUSCON TRU-SEAL. Quick-drying, sealing wall size. Bridges over hair checks. Unaffected by "hot spots" in plaster. One gal. covers 350-450 sq. ft. one coat. Over it a two-coat paint job can be completed in one day over unfinished plaster. The Truscon Laboratories, Detroit, Mich. 96

TRIPLE LIFE. While operating on the accepted principles of protection through sealing the surface and pores against the elements, Triple Life differs from other materials of this type in that it is not based on varnish, lacquer, or shellac, and does not contain any of these hard surfacing substances but rather provides a minutely thin, invisible, and flexible film of great durability. Quickly applied with a cloth, spray gun, or brush, and dries in a few minutes. It stops oxidation, prevents colors fading, and materially slows down the weathering processes as well as gives protection from dirt and dust. Franklin Research Co., Philadelphia, Pa. 97

WALL KOVER. Will produce a finished wall in one day, either one or two coats, over old or new work. It

is an oil-base paint for plaster walls, but may be used with equal success on interior woodwork, brick and cement surfaces. Works particularly well over sand-finished plaster. Does not penetrate into the surface but adheres with a tough, elastic film which acts as a seal against alkali or uneven suction. General Paint Corp., San Francisco, Calif. 98

HOUSE PAINT UNDERCOAT. An undercoat designed to have rather strictly controlled penetration into old paint coats over which it is applied, or into wood, and to bridge small checks or cracks and provide a more definitely planar surface than heretofore for the top coat. Very white jobs have been secured in two coats over old porous green or red surfaces, providing the top coat used has normal hiding power. Devoe & Reynolds Co., Inc., 1 West 47th Street, New York City. 99

MEDUSA-LITE is a lithopone casein paint in paste form, for use on interior walls, ceilings—whether of concrete, brick, tile, stone, plaster, insulating board, metal, wood, canvas, or wall board. Sprayed or brushed on. One coat is usually sufficient. Dries quickly and has no odor. Requires no sizing. In white and seven pastel shades. Its colors do not turn yellow and are lime proof. Colors are intermixable and can be tinted with either dry colors or colors in oil. They have a high light-reflective value—90 per cent and greater. Easily washed. Medusa Products Co., Cleveland, Ohio. 100

DURACAL WASHABLE CALCIMINE. A dry powder prepared for application by mixing with cold water only. Has hiding power above the average. Can be washed. New coats can be applied over old coat. Eight colors and white. United States Gypsum Co., Paint Products Division, Chicago, Ill. 101

MURAL-TONE WALL PAINT. Lithopone-casein paint for interior use. One coat usually covers. Dries in one hour. A brilliant white, over 90 per cent light reflective. Will not yellow with age. Ten colors besides white. Unaffected by vapor, heat, and acid fumes. Cleansable and durable. Paste form, thinned with water—or with boiled linseed oil to stop suction. The Muralo Co., Inc., Staten Island, N. Y. 102

DEEP COLOR TEXOLITE. A casein paint for interior use in eight deep colors. Designed for intermixing with white to produce unlimited shades. One-coat coverage. Dries in two hours. United States Gypsum, Chicago, Ill. 103

COLD WATER EXTERIOR PAINT. An economical utility paint, casein bound, for periodic repainting and renewal. Dries to a hard smooth surface of even true white color, and will not rub off. United States Gypsum Co., Paint Products Division, Chicago, Ill. 104

COLD WATER INTERIOR PAINT. A starch-bound material, furnished in white for interior uses. More economical than calcimine. Specially adapted for interiors of factories, warehouses, garages, and industrial buildings. United States Gypsum Co., Paint Products Division, Chicago, Ill. 105

REARDON'S WASHABLE KALSOMINE. A one-coat finish for solid interior surfaces, painted or unpainted. To be mixed with water and applied with a wide brush or spray; after it has been on the surface thirty days the surface may be repeatedly washed with soap and water without damage to the film. The Reardon Co., St. Louis, Mo. 106

DULUX SUPER-WHITE. A new type of white enamel for construction work, quite different from the long-oil enamels previously used. It possesses exceptional initial whiteness and in addition retains its whiteness over a long period of time. It dries quickly without after-tack, and has unusual resistance to dirt collection. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. 107

ALCHEMIK-COLORS (and Natural)—a new type fast-drying one-coat enamel finish for interior and exterior. Brushes out easily, flows smoothly, without brush marks. In 18 colors beside black, white, and clear. The Truscon Laboratories, Detroit, Mich. 108

LIQUID COPPER. Not a mere bronze powder, but elemental copper broken down into extreme fineness, of non-crystalline form, in a special vehicle. Well adapted to use on metal surfaces, to form corrosion-resisting surfaces, interior and exterior. Nichols Copper Co., Chicago, Ill. 109

STREAMLITE FLAT WALL PAINT. Paste form, thinned with water. Brush or spray. In white and nine tints. Dries in 30 minutes. Washable with neutral soap and water after 30 days. Applicable to damp as well as dry surfaces. No offensive paint odor. A. C. Horn Co., Long Island City, N. Y. 110

SILVR-GARD ALUMINUM PAINT. Silvr-Gard's exceptional brilliancy is due principally to the use of a super-polished aluminum bronze powder of extreme fineness and a special type vehicle which produces an unusual leafing effect. Produces a smoother finish than the average aluminum paint and possesses maximum light-reflecting value. Detroit Graphite Co., Detroit, Mich. 111

PROTEXALL WATERPROOFING. A colorless liquid for brushing or

spraying on interior and exterior surfaces that are acid-resistant. Composed of pre-oxidized oils and waterproofing material. Will not crumble, become brittle, or crack. The Protexall Co., Architects' Building, Philadelphia, Pa. 112

POR-LOX. A penetrative seal and pore-filler for exceptionally porous masonry walls and floors. Applied warm, rubbed or scrubbed into surface. Applied over colored stucco, it intensifies the color and darkens it. One gal. for 100 sq. ft., one saturating coat scrubbed in. The Truscon Laboratories, Detroit, Mich. 113

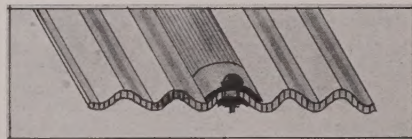
ALEHEMIK CONCRETE FLOOR COATING. For basement and garage floors or others laid directly on ground—interiors only. Non-saponifiable; made on a rubber base. Lime and moisture resisting. Nine colors and

natural. One gal. covers 200-250 sq. ft. 2 coats. The Truscon Laboratories, Detroit, Mich. 114

STUCCO TEX. No. 200—a water-repellent hydraulic cement compound containing non-shrinking filler. Used over brick walls, cracked stucco, etc., brushed and rubbed in. Covers 150 sq. ft. to gal. one coat; for mortar joints only, about 600 sq. ft. of brick surface to the gal. The Truscon Laboratories, Detroit, Mich. 115

BAR-OX FORMULA 97. A penetrating rust inhibitor. Applied to rusty surfaces, prevents rust from increasing under a finish coat of paint. Not a primer, but for use over rusty surfaces only. Color, clear. Apply by brush, spray, or dipping. The Truscon Laboratories, Detroit, Mich. 116

26. Glass and Glazing



EASTMAN GLASS. A new process of painting on glass. Raised decorations are applied to glass (or metal or wood), with gold, silver, and mother-of-pearl applied and burnished over them. A substitute for the more expensive stained and leaded glass. Eastman Decorators, Inc., 15 West 51st Street, New York City. 117

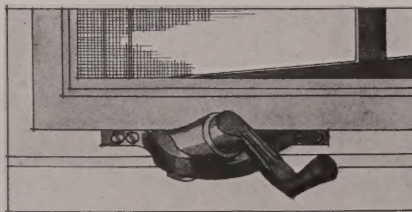
CORRUGATED WIRE GLASS. A structural glass supplied in sheets

27 $\frac{3}{4}$ " wide and up to 8' long, with corrugations 1" high and 2 $\frac{1}{2}$ " on centers. Due to its great strength, it is used as a roof and sidewall covering, and to glaze windows and

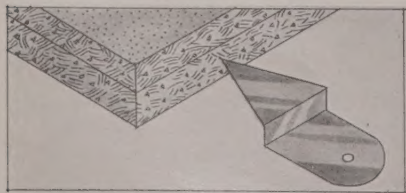
skylights. The sheets are assembled with suitable metal glazing accessories. Pennsylvania Wire Glass Co., 1612 Market Street, Philadelphia, Pa. 118

COLD WATER PUTTY. A smooth-working, quickly applied, non-shrinking spackling material. Adheres to any clean surface. United States Gypsum Co., Paint Products Division, Chicago, Ill. 119

27. Hardware



TIGER WALLBOARD CLIPS. Used for attaching fiberboard, and eliminates exposed nail heads on the surface of the material. The clips are pushed into the edge of the fiberboard and nailed to the joist. The clips on the



adjoining board slide under the board already attached. The V-W Co., 471 East Broad Street, Columbus, Ohio. 120

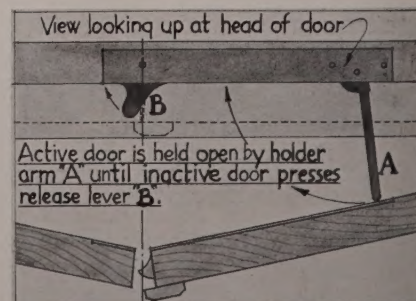
WIN-DOR ANGLE-DRIVE CASEMENT OPERATOR. Worm and gear type, with $\frac{3}{4}$ " diameter naval bronze

worm gear; malleable iron, zinc, or brass case; steel, brass, or Monel arm. Series 28 for steel sash; Series 29 for wood sash; both opening out, with screens inside. The Casement Hardware Co., 406 No. Wood Street, Chicago, Ill. 121

YALE SELF-LUBRICATING LATCH BOLT. Latch bolts of all Yale pin-tumbler mortise locks and latches are now supplied with an oil-impregnated wood insert which reduces friction between bolt and strike and

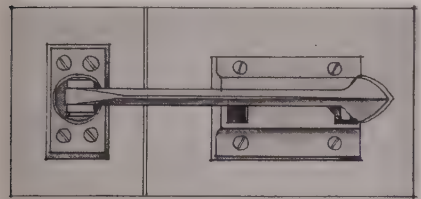
makes door close easily and quietly; lubricant is permanent. Yale & Towne Mfg. Co., Stamford, Conn. 122

VON DUPRIN CO-ORDINATING DEVICE. To hold open active door of pair of doors until the inactive door has first closed. Surface-applied, or mortised into stop, on inside of



building. Reversible for doors of either hand. Special design holder arm permits correct installation of each individual job. All brass or bronze in all standard finishes. Vonnegut Hardware Co., Indianapolis, Ind. 123

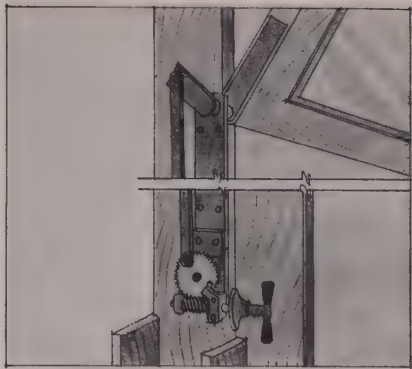
DOOR FASTENER. Arched arm substitute for chain. Arm hangs down



along trim when disengaged. Either right or left hand, all finishes. Sargent & Co., New Haven, Conn. 124

YALE MORTISE SASH LOCK. No. 243, for use on windows to limit the distance that the sash can be opened. When sash is closed the spring bolt on sash engages with an elongated strike, so that sash cannot be moved more than 2½" without using the key. Yale & Towne Mfg. Co., Stamford, Conn. 125

YALE CONCEALED TRANSOM OPERATOR. No. 1234. Designed to operate interior door transoms, bottom



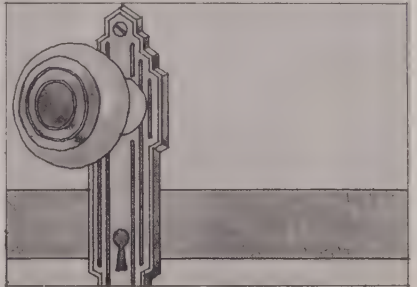
or center pivoted, opening in, of metal or wood. Device applied as a unit; no butts required; all concealed except T-handle and rose. Opens to 45 degrees and locks at any point. Yale & Towne Mfg. Co., Stamford, Conn. 126

MUSHROOM DRIVERS IN YALE CYLINDERS. Developed to increase the security of Yale pin-tumbler locks and to obtain maximum resistance to picking. Now regularly furnished in rim and mortise pin-tumbler cylinders and in higher grades of padlocks. Yale & Towne Mfg. Co., Stamford, Conn. 127

MASTER TYPE A2 VON DUPRIN RIM EXIT DEVICE. All drop-forged brass or bronze. Double-acting

cross bar with quick release on latch bolt. Double-compression springs. ¾"-throw latch bolt, operates on a heavy roller strike. Furnished in two backsets to place outside trim on center of various width stiles. Obtainable in all desirable functions, in both single and double cylinder control. Symmetrical in design, rugged in construction. Dogging feature both ends of cross bars. Minimum number of internal parts. Vonnegut Hardware Co., Indianapolis, Ind. 128

LOCKWOOD PATRICIAN LOCKSETS. The knob has a molded plastic body, available in ivory, ebony, and four other colors; with top and shank of



die-cast metal (also brass and bronze). Sets are in the price range of ordinary glass knob sets. Lockwood Hardware Mfg. Co., Fitchburg, Mass. 129

28. Furnishings

AMERICAN UNIVERSAL BETTER-SIGHT DESK. Combination swivel seat and desk designed to provide hygienic and comfortable posture for school use, in addition to providing for proper angle of vision, correct



focus, and correct position of book. Top tilts to flatter position for writing. American Seating Co., Grand Rapids, Mich. 130

ACOUSTIWALLS. Movable metal partitions, the panels of which are surfaced on one or both sides with perforated metal sheets backed by sound-absorbent materials. Available in flush or panelled type, in various finishes. The E. F. Hauserman Co., Cleveland, Ohio. 131

FLUSH WALL OF STEEL. With or without glass. Thickness, 3". Sound insulated. Continuous wiring base (no plinth blocks); continuous wiring cornice, either side. Leveling for uneven floors. Interchangeability of panels with doors. Multiple widths of 6" to 42"; standard cornice heights of 7' 4⅞", 8' 9⅞", and 9' 3"; also 10' 1½" in steel and glass only. The Mills Co., 965 Wayside Road, Cleveland, Ohio. 132

ALL-IN-ONE PORTABLE BAR. Of tubular and sheet steel; sliding top; locked bottle compartment. Size, closed, 17" x 23½"; 33" high. Glasses and other equipment included (eight glasses each of four sizes). Various metal finishes. Royal Metal Mfg. Co., 1136 So. Michigan Blvd., Chicago, Ill. 133

ROYALCHROME HALF-ARM CHAIR, No. 8. Tubular steel heavily chromium plated. Flex-spring seat in various colors of leatherette or



leather. Also new types of furniture for shoe store, millinery department, hotel, and beauty parlor use, in tube and leather. Royal Metal Mfg. Co., 1136 So. Michigan Blvd., Chicago, Ill. 134

MEDART STEEL WARDROBE. For grade-school classrooms. Absolute teacher control—doors open and close with master doors. Doors suspended from within a continuous frame, and are not affected by future floor variations. Fire-resisting, vermin-proof. Free-standing or recessed (16"). Fred Medart Mfg. Co., Potomac and DeKalb Streets, St. Louis, Mo. 135

MILLER SCHOOL WARDROBE. Single control by teacher operates the en-

tire wardrobe. Then an automatic bolt holds all doors securely open. Any door may be opened separately or all doors opened or closed simultaneously. With wood or steel doors. Also furnished with slate blackboard or cork bulletin-board. In 26", 28", or 30" widths; recess should be not less than 30" deep. K-M Supply Co., Inc., 119 West 8th Street, Kansas City, Mo. 136

No. 3U COMBINATION WARDROBE RACK. Accommodates umbrellas and overshoes, as well as coats and hats. For use in offices, banks, waiting-rooms, schools, etc. Embodies all the features of the regular Peterson all-steel one-check system. Vogel-Peterson Co., Inc., 1801 N. Lincoln Street, Chicago, Ill. 137

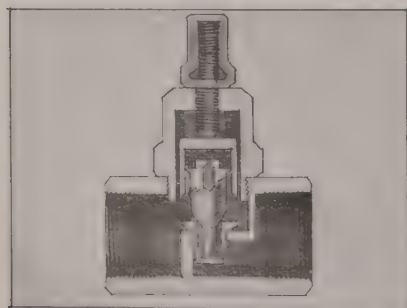
SALUBRA No. 55208. A "surfaced" wall covering as distinguished from the patterned type. Emphasizes the oil-paint finish to such an extent that it is visible. A surface, by the roll, that is equivalent to six coats of oil paint. Can be scrubbed clean with brush, soap, and water; does not fade. Frederic Blank & Co., Inc., N. Y. Central Bldg., New York City. 138

REVOLITE. A new, flexible, waterproof cloth, coated with bakelite resinoid; is resistant to water, chemicals and abrasion. Available in a wide range of colors and prints. Especially suitable for decorative coverings, upholstery, draperies, curtains, pillow covers and cushions. Bakelite Corp., Bound Brook, N. J. 139

29. Plumbing

COLOR VALVE WHEELS. Color indexing banishes doubt, speeds control. Two-piece construction consisting of a hub which is fastened to valve spindle and colored cover plate which snaps securely into the hub. All hubs are a rich black color. Cover plates are stocked in five standard colors: red, blue, gray, green, and black. These covers can be supplied plain or with service markings molded in clear relief letters. Jenkins Bros., New York City. 140

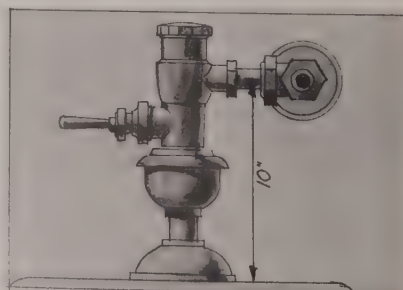
YARWAY STEAM TRAP. Depends for its operation on the difference in flow characteristics of cold water, hot water, and live steam, flowing through two orifices with a chamber



between. Only moving part is valve disc. Made in six sizes, 1/2" to 2", and is little larger than a pipe union. Body of cold rolled steel, working parts of hard monel, bonnet and cap of brass. Factory-set to operate all pressures from 0 to 400 lbs. Yarnall-Waring Co., Chestnut Hill, Philadelphia, Pa. 141

STERLING INSTANT WATER HEATER. An instantaneous water heater, so designed as to accelerate the transfer of heat from water supplied by the heating boiler as a heating medium to the domestic water. This is accomplished by dividing the domestic water stream into a large number of small streams as it passes through the tank of the heater. This division is accomplished by a multiple of small-diameter copper coils grouped into a supply manifold at one end of the heater and a discharge manifold at the other end of the heater. By this method an unusually large volume of water can be heated as fast as it can flow through the coils. Sterling Engineering Co., 3738 N. Holton Street, Milwaukee, Wis. 142

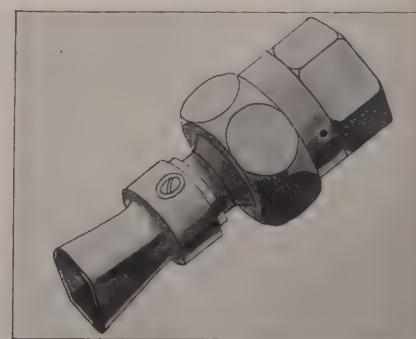
GUARDIAN VACUUM BREAKER. A device to be used with a flush valve on a closet bowl to prevent back-siphonage and contamination of the fresh water supply. Where a vacuum occurs in the supply, a disc rises against a seat and makes a positive seal allowing only the at-



mosphere to enter the supply and break the vacuum. Can be used with any Crane flush valve or any flush valve having 1 1/2-inch male straight pipe threads on the outlet. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 143

AUTOMATIC DRAINAGE UNIT. Model DSM. Operating only when flood water or seepage arrives. Rustproof. A simple sump of one section tile, a 1" pipe connection, and an electric socket plug. Capacities in gals. per min., nine sizes between 15 and 47. Kewanee Private Utilities Co., Kewanee, Ill. 144

CRANE ECONOMY SHOWER HEAD. C-4871-B. A water-saver, using only 3 1/4 gals. per min. at 10 lbs. pres-



sure. Concentrated shower stream; a rain shower with uniform distribution. Large openings make little danger of clogging. Spring-loaded ball joint that will not corrode in a

set position. Crane Co., 836 So. Michigan Ave., Chicago, Ill. 145

CADWELL HOT-WATER HEATING SYSTEM. Domestic supply boiler with automatic feed valve, line valve, and springless relief valve. Keeps expansion pressure within working limits, even under sudden oil firing. Keeps system filled. Protects boiler. The Beaton & Cadwell Mfg. Co., New Britain, Conn. 146

SAN-EQUIP MASTER SEPTIC TANK. An improved metal septic tank for home and camp disposal systems. Horizontal design provides increased capacity with longer flow of sewage, allowing more thorough treatment. T-type top intake reduces possibility of clogging and serves as trap and fresh-air intake to house stack. Intake extension above ground marks tank location and provides easy access to intake without digging. San-Equip, Inc., Syracuse, N. Y. 147

STERLING BELLOW VALVES. A packless radiator valve designed to overcome the most common cause of failure of bellows valves, that is, torsional strain. Hydron bellows are so assembled with the valve stem and plunger as to prevent all torsional strain. The elimination of all torsion increases the life of the bellows and correspondingly increases the life of the valve. Sterling Engineering Co., Milwaukee, Wis. 148

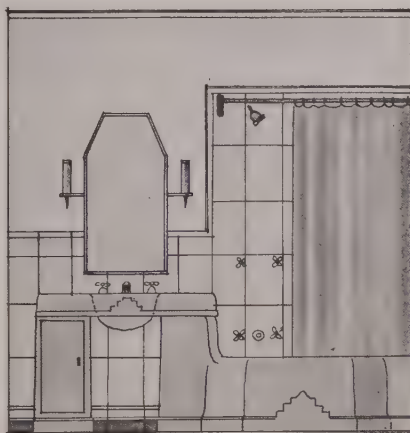
CRANE "IMPROVED AGILIS JR." AND "IMPROVED TELSA JR." FAUCETS. C-31932-RN and C-31843-RN. Now furnished with a "Newsleeve" trimming unit that slips in like a cartridge and gives the faucets a new life span. Renewable seats. Spouts raised above rim of lavatory to prevent back siphonage. Crane Co., 836 So. Michigan Ave., Chicago, Ill. 149

CRANE "IMPROVED TELSA" SHOWER. C-4412. A two-valve shower especially designed for use with sheet-metal compartments. Refreshes easily cleaned head—simply turn face with thumb lugs, and flush. Newsleeve trimming unit; valves with renewable seats. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 150

STERLING AUTOMATIC MIXING VALVE. A thermostatic type of valve actuated by the expansion and contraction of a volatile liquid within a bulb. The bulb is inserted

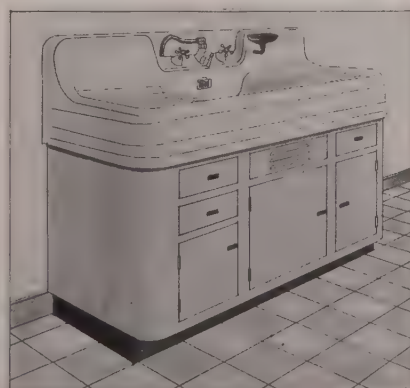
in the domestic water line several feet from its junction with a cold-water supply. The valve is actuated by the differential between the pressure of the expanding liquid on one side and the resistance of a weighted lever on the other. When the pressure of the volatile liquid in the lower bellows chamber exceeds the resistance of the weighted lever, the valve tends to open, and when it drops below the weight or pressure of the lever, the valve tends to close, thus the volume of water admitted to the domestic line is regulated. Sterling Engineering Co., Milwaukee, Wis. 151

THE LAVASHOWER. Porcelain-enamelled unit consisting of shower, tub, lavatory, and storage cabinet. Length, 7'; depth of tub, 2' 11".



Tub has same inside length as usual five-foot tub, extending under lavatory top. In regular or acid-resisting enamel, white or ivory. Lavashower Corp., 112 So. 16th Street, Philadelphia, Pa. 152

CORWITH CABINET SINK. A compact unit of heavy-gauge steel. Doors and drawers are of hollow construction, filled with deadening



material, and close on rubber bumpers. Cabinet is finished with two coats of hard long-wearing baked enamel. Sink can be furnished in white or in colors—has an 8" back and 8" apron, and is 8" deep. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 153

NEUTON CLOSET COMBINATION. C-11125-JA. Washdown closet; compact; tank set low; tank connection concealed. Eliminates the characteristic front bump of washdown type. Measures only 14" from floor to rim, as recommended by medical authorities. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 154

CRANE "RIVAL" MIXING-VALVE SHOWER FIXTURE. C-4396. Especially designed for use with sheet-metal compartments. Refreshes shower head. Exposed stuffing-box that can be repaired without removing escutcheon. Disc holders integral with yoke to prevent chattering. Seats renewable. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 155

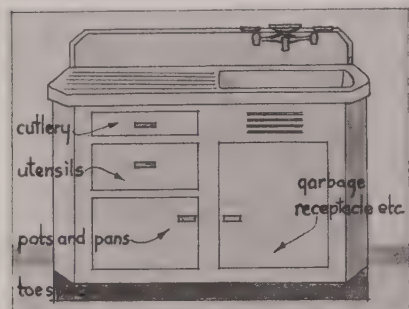
"STANDARD" NEO-LINE SINK. A kitchen sink, enamelled on cast iron, designed with flowing curves, easy to work around and to clean. Has 6" handy shelf, swinging spout faucet. Flatter surface drain boards, with radially placed drainage channels. Oval sink well. Acid-resisting or regular enamel, white or colors. 42" single drainboard and 60" double drainboard sizes. Standard Sanitary Mfg. Co., Pittsburgh, Pa. 152

"STANDARD" NEO-ANGLE BATH. Corner and recess models. The tub portion is set on an angle in a four-foot square with two ample integral seats. Every type of bathing can be done while seated. Bath is 2" lower than average, holds same depth of water and has more bathing space and provides more ample elbow room. Has wide flat bottom. Standard Sanitary Mfg. Co., Pittsburgh, Pa. 157

THURSTEND FOUNTAINS. C-9155—C-9158. Combine vitreous china receptors of modern design with all recent mechanical developments in sanitation: elimination of a possible back-siphonage or cross connection, automatic regulation of the height of the drinking stream, and Newera three-stream angle bubbler, with

lip guard to prevent contamination by contact. Self-closing valve with a removable trimming unit and renewable seat for ease in repairing. Wall and floor standard types. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 158

CABINET SINK UNIT. Acid-resisting porcelain-enamelled sink top on steel baked enamel cabinet. Swing-spout faucets and valve-type crumb strain-



er. Sizes: 60" x 22" double drainboard; 52" x 22" and 42" x 22" in either left or right drainboard. The Youngstown Pressed Steel Co., Warren, Ohio. 159

CRANE "SI-WEL-CLO" CLOSET COMBINATION. C-10380. An innovation in the interests of hygiene and efficiency. Has a decided dip in the rim for correct posture. Unusually

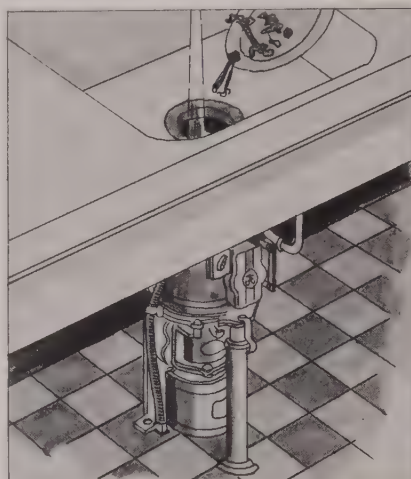


quiet; large water surface; large trapway. Tank rests on raised ledge of closet, securely bolted, with adjustment for roughing-in variation. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 160

SUNNYSIDE CABINET SINK. For the small house or apartment. As unit or as part of continuous counter-shelf cabinet arrangement. Porcelain-enamelled iron—regular or acid-resisting—with 8" back. Basin, 22" x 18" x 8". White or color;

right or left corner. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 161

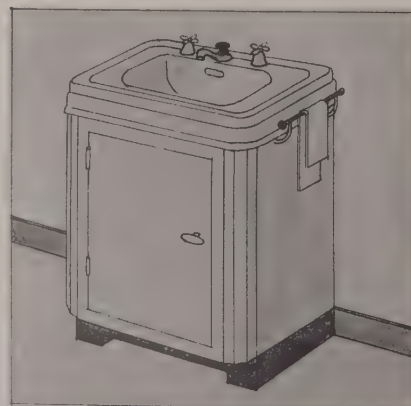
GARBAGE GRINDER. A hopper installed beneath the kitchen sink or sold in conjunction with G.E. dishwasher-sink assembly. Collects, grinds, aerates food solids, grease, chicken bones and chop bones, citrus fruit skins, so they will pass freely into sewage stream. Driven



by 1/4 h.p. motor. General Electric Co., Specialty Appliance Dept., Neal Park, Cleveland, Ohio. 162

TELESCOPIC CURTAIN ROD. For Neo-Angle recess bath. Chromard-finish rod disengages from one end, telescopes, and is hooked along side wall, becoming a high grab rail. Standard Sanitary Mfg. Co., Pittsburgh, Pa. 163

CORWITH TUCAWAY CABINET LAVATORY. Porcelain-enamelled iron with cabinet under for storage space. Size, 24" x 20", with towel bar, raised spout to prevent back-siphonage. Toe room at base. In white or color. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 164



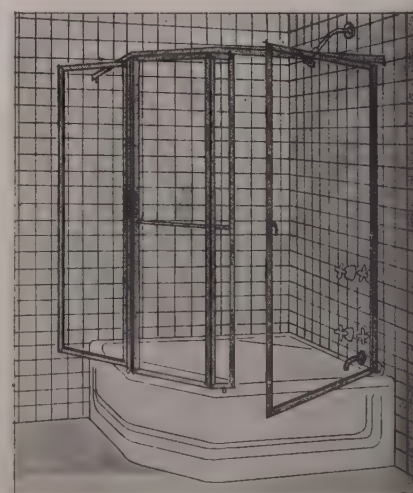
"STANDARD" NEO-LINE SINK WITH CABINET. A steel cabinet provided for roll-rim type Neo-Line sink. In place of drawers it has 18" diameter



shelves in revolving drum which readily moves to open or closed position. Well ventilated, dry cupboard under sink well. 42 and 60-inch lengths by 22-inch width. Adjustable to set sink 34 to 36" floor to rim. White, ivory and green. Standard Sanitary Mfg. Co., Pittsburgh, Pa. 165

RUNDLE-SPENCE DRINKING FOUNTAINS. Wall, No. 122; pedestal, No. 14. Modernistic octagonal design, in six colors; hooded angle-jet nozzle set above rim, preventing contamination if drain clogs; ball-bearing, self-closing valve. Rundle-Spence Mfg. Co., 445 No. 4th Street, Milwaukee, Wis. 166

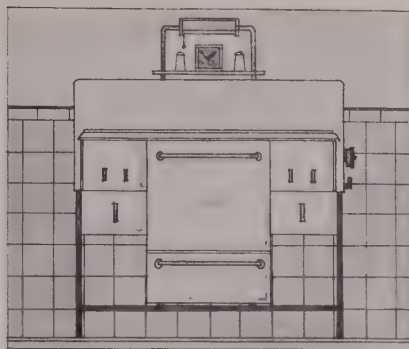
LEHMAN SPRAYSHIELDS. For Neo-Angle baths. Plate glass and chromium bronze frames in various patterns for all positions of tub. Individually designed for each bathroom. Lehman Sprayshield Co., 2514 No. Broad Street, Philadelphia, Pa. 167



AUTOFYRSTOP. Combination blank-cartridge alarm (or electrical, distant) and bottle container of extinguishing fluid. Automatic fusing trip produces bulk diffusion or release for hand sprinkling. Three sizes: 14, 24, and 36 oz. Autofyrstop Co., 2035 Washington Avenue, Philadelphia, Pa. 168

CRANE PORCELAIN ALL-CLAY LAUNDRY TUBS. C-21148. Clean and sanitary, with all rounded corners. Supply fixture, with swivel spout, located above rim, preventing contamination of supply through back-siphonage. Steel angle frame support. No cover. Crane Co., 836 So. Michigan Ave., Chicago, Ill. 169

MAGIC CHEF GAS RANGE. Chrome-finish tubular steel frame and light standard. Lid top in two parts.



All the regular Magic Chef features. American Stove Co., St. Louis, Mo. 170

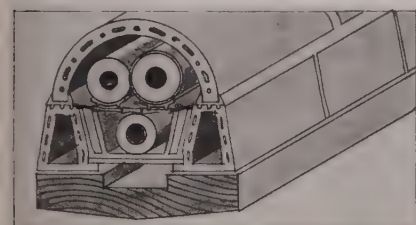
WEISWAY SHOWER CABINET. Walls and receptor of vitreous porcelain enamel, the receptor being made non-slip by fusing certain ingredients into the enamel. Height, 81". In two sizes: 32" x 32" and 36" x 36". Finish, diffused green, trimmed

with chromium plate. Equipped with two-valve fixture and accessories. Also available in galvanized walls, enamelled in various colors. Henry Weis Mfg. Co., Inc., Elkhart, Ind. 171

PYRENE TWO-QUART AIR-PRESSURE FIRE EXTINGUISHER. This extinguisher has two cylinders, one for Pyrene fire-extinguishing liquid and the other one for air under pressure used to discharge the liquid. It discharges both a solid stream and a fan-shaped spray, the latter being effective in blanketing containers of flammable liquid with an inert fire-smothering vapor. This extinguisher is recommended for incipient fires in all classes of combustible materials, and especially for flammable liquids and live electrical equipment. Pyrene Mfg. Co., 560 Belmont Avenue, Newark, N. J. 172

30. Heating and Ventilating

UNDERGROUND STEAM CONDUIT SYSTEM. Therm-O-Tile consists of a 4" poured concrete base as support for pipe and the conduit tile independently. Pipe supported on cast-

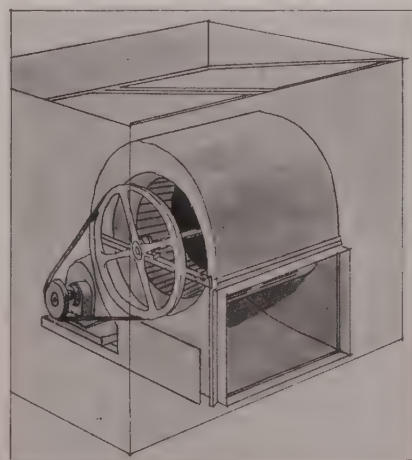


iron adjustable supports. Can be made perfectly leak-proof for submersion under water where necessary. Permits use of any type of insulation. H. W. Porter & Co., 825 Frelinghuysen Avenue, Newark, N. J. 173

PAYNE FORCED AIR UNIT. "Fau" is designed for small homes without basement. Gas-fired, in a compact enamelled casing, it encloses heating element, blower and control equipment, operating on up-blast or down-blast as forced-air heater in winter and ventilator in summer. Three sizes: for 995, 1400, and 1990 c. f. m. air delivery. Payne Furnace & Supply Co., Beverly Hills, Calif. 174

CLIMATOR IV FAN AND FILTER UNIT. A combination fan and air-filter unit adaptable for use on any size or make of warm-air furnace to convert it to a forced-air system. Available in two sizes, from 1050 to 1575 c.f.m. against $\frac{1}{4}$ " static and 1625 to 2450 c.f.m. against $\frac{1}{8}$ " static. Finished in green prismatic lacquer. L. J. Mueller Furnace Co., Milwaukee, Wis. 175

CLIMATOR V FAN AND FILTER UNIT. For use in conjunction with any warm-air furnace. It is made in two

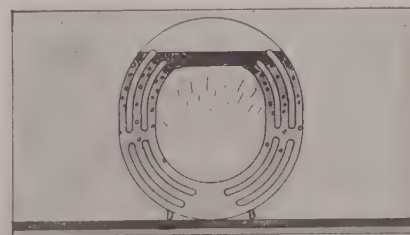


sizes, with capacities from 1000 to 1500 c.f.m. against $\frac{1}{4}$ " static, and 1600 to 2400 c.f.m. against $\frac{1}{8}$ " static. Finished in aluminum bronze. L. J. Mueller Furnace Co., Milwaukee, Wis. 176

NATIONAL JACKETED SQUARE OIL-BURNING BOILER. Three series and

fourteen sizes, produced to meet the definite need for oil-burning units, attractive in appearance, reasonable in first cost, efficient and economical in operation. The boiler is designed to work efficiently with any standard make of rotary or gun-type burner; offers ample combustion space, and has free and rapid water circulation. Units are thoroughly insulated against heat loss and noise, by a thick layer of rock wool. Special tappings provided for an external water heater. For use on steam, vapor, or hot-water systems. A surety bond guarantees that each boiler will deliver its bonded output. National Radiator Corp., Johnstown, Pa. 177

OIL ECONOMY BOILER—A cast-iron boiler for use with gun-type burners, in three sizes up to 1250 ft. of steam output. Has a 37" water line,



molded refractory, built-in domestic water heater, provision for oil controls, is insulated and jacketed. Flue travel horizontal and entirely

water-surrounded, producing 80 per cent efficiency with back temperatures of 375°. International Heater Co., Utica, N. Y. 178

NATIONAL OIL BOILER. Consists of a specially designed steel, oil-burning boiler, housed within a modern, streamlined jacket designed by Lurelle Guild. Space is provided within the jacket for an oil burner, and all necessary controls. Sold as a complete unit, including boiler, burner, and controls. Installation simplified, as the installer need only make oil, piping, and electrical connections. Coils for heating domestic water are optional equipment. National-Williams Oil-O-Matic Boiler Burner Units are also available exclusively for hot-water supply purposes. National Radiator Corp., Johnstown, Pa. 179

BURK'S CONDENSATION RETURN UNIT. For the small steam plant. Copper-bearing steel tank, 14" diam., 22" high, with ball-float controlling switch to turbine pump. Floor area occupied, 22" x 24", 29" high. The Decatur Pump Co., Decatur, Ill. 180

BURNHAM NEW OIL BOILER. Designed for oil-burning residential use. Furnished equipped with an extended jacket that encloses both boiler and burner. For any pressure-type burner. Built-in water heater, low-water cutoff; precast combustion chamber refractory. Insulated for heat and sound. Burnham Boiler Corp., Irvington, N. Y. 181

C-N SPENCER BOILER. Cast-iron, sectional, magazine-feed boiler designed to burn chestnut anthracite or coke. Continues original Spencer design and operating principles of fuel storage, gravity feed, and sloping grates. For residential heating by steam, vapor, or hot water in wide range of capacities. Spencer Heater Co., Williamsport, Pa. 182

KEWANEE ROUND-R STEEL BOILER. For residential heating with any oil burner. Two-pass tubes fitted with spiral spinner blades which induce transfer of heat from gases to boiler water, and by withdrawal scrape the soot from tubes. Hot-water coil, balanced draft adjuster, aquastat and stackstat. With or without enclosing jacket. Kewanee Boiler Corp., Kewanee, Ill. 183

SARCO GRADUATOR HEATING SYSTEM. Volume of steam passing through main controlled by outside weather conditions, permitting thermo zoning to equilibrium. Each radiator controlled also by self-operated graduating valve. Mechanical, not electrical. Sarco Co., Inc., 183 Madison Avenue, New York City. 184

G. E. GAS FURNACE. In a variety of units, designed for residential, commercial, or industrial use; for steam, vapor, or hot-water systems; also used to supply heat for winter air conditioning. Available with two-tone gray steel jackets entirely enclosing the boiler and controls, or with an attractive plain jacket enclosing boiler only. In the water-backed boiler sections the diamond-shaped projections of adjacent sections, with a staggered arrangement, insure maximum heat transfer as the hot gases from combustion zigzag over them. Sides and top of boiler are insulated with one inch of air-cell asbestos. Operation is automatic. General Electric Co., Schenectady, N. Y. 185

NATIONAL PREMIER STEEL BOILER. Residential series, recently added. Available for use with solid fuels—hand or stoker fired—oil, or gas. The use of a recessed smoke-chamber eliminates the usual projecting sheet metal smoke-box, saves space and eliminates complications. Extreme compactness permits easy transportation and installation, and—because tubes are inserted from the front of the boiler—the boiler can be set back near the wall. Coils for heating domestic water may be included, if desired. National Radiator Corp., Johnstown, Pa. 186

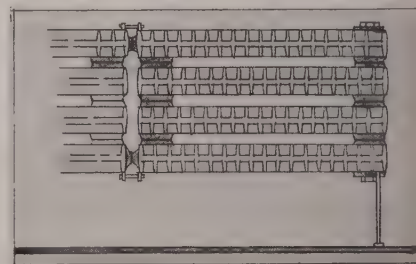
BURNHAM BELLOWS VACUUM VALVE. Designed for converting a one-pipe steam system to a one-pipe vacuum system. No checks or discs are required to close the valve against vacuum; they let the air out of the system but prevent its return. Replaces the former air valve. Burnham Boiler Corp., Irvington, N. Y. 187

QUIET MAY OIL FURNACE. A dual-purpose boiler providing comfort heat and tankless domestic hot water both summer and winter. Built into the furnace, a domestic hot-water heater under independent automatic control supplies ample water all year round. Controlled warmth in the

basement is also offered by a special air heater built into the furnace cabinet. The cabinet itself, finished in French gray and black with brushed chromium trim, encloses all working parts. All connections are made at the rear of the boiler, enhancing the appearance. May Oil Burner Corp., Baltimore, Md. 188

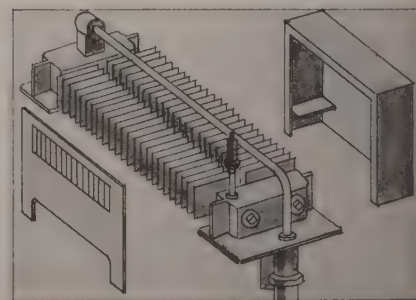
NEW MODINE UNIT HEATER. Many exclusive features; foremost among these is that of direct suspension of the units from the steam (or hot-water) pipe, which facilitates redirection of the heated-air stream, minimizes labor costs and effects definite savings in material costs—no brackets, pipe rods, etc., being necessary. Other important exclusive features are the expansion bend and the velocity generator. Modine Mfg. Co., Racine, Wis. 189

CAST-IRON CONVECTORS. The Utica Convector, of cast iron, has same operating characteristics as direct radiators, and both can be used on same system with balanced results. The widely spaced, integrally cast fins offer minimum resistance to air



flow; ample cored section for good circulation. Utica Radiator Corp., Utica, N. Y. 190

SIMPLEX CONVECTOFIN. A copper heating element inside of a steel cabinet, in several styles, for single-pipe connection on steam, vapor or vacuum systems. Uniflow principle, with steam, air, and condensate moving in same direction inside the



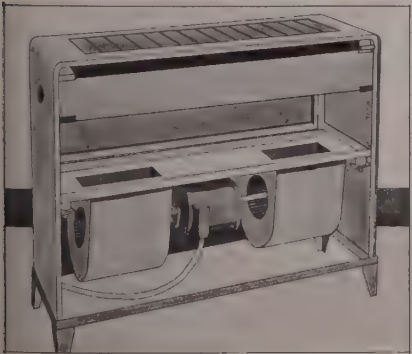
loop form. Commodore Heaters Corp., 11 West 42d Street, New York City. 191

AERO CAST-IRON CONVECTORS. Designed exclusively for concealed use. Operate on the principle of delivering a large volume of air moderately warmed. This concentrates the warmth in the living zone of the room. The design is such that these units will operate on hot water, even in mild weather, as well as on steam. Cast-iron construction assures natural resistance against corrosive action, and makes it possible to accurately predict the life of the unit. The large water or steam capacity, combined with a substantial body of metal, make the unit serve as a reservoir of heat, a valuable feature in automatic temperature control. Fins are cast integral with tubes, and are widely spaced, which makes them self-cleaning. Units are extremely strong and sturdy. National Radiator Corp., Johnstown, Pa. 192

MODINE HOT-WATER COPPER RADIATOR. This new all-copper convector, designed specifically for hot-water heating systems, is not subject to the usual penalty of capacity relative to steam performance. It requires no more radiation than does exposed cast iron on a hot-water system. It eliminates the confusion caused by figuring "additional percentages." Modine Mfg. Co., Racine, Wis. 193

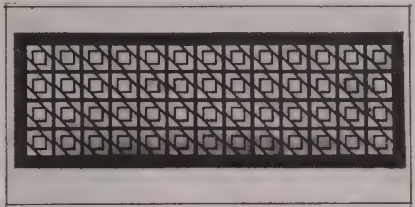
BURNHAM RADIATOR. Requires one-third less space than conventional tube type. Recommended to be installed recessed with open-front shield and upper grille. Burnham Boiler Corp., Irvington, N. Y. 194

FORCE-FLO CONVECTOR. A cabinet-type unit heater for use in lobbies, auditoriums, gymnasiums, and other large spaces. Made in a complete



variety of sizes. The Trane Co., La Crosse, Wis. 195

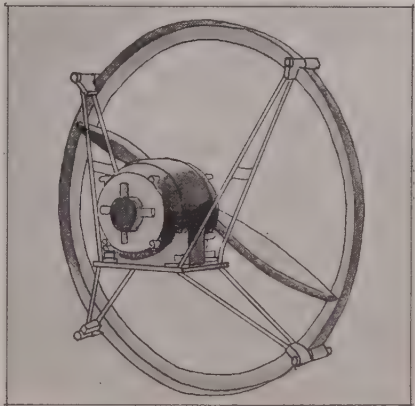
GRILLE M No. 7. A new type of grille, furnished in steel, bronze, aluminum, stainless steels, Monel,



and other commercial metals. The design is covered by Design Patent No. 91,266. Hendrick Mfg. Co., Carbondale, Pa. 196

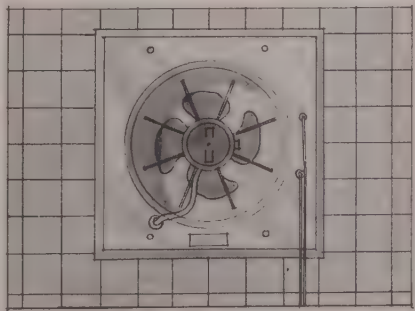


CHARAVAY BIRDWING VENTILATING FANS. Shape of wings and method of preventing backflow of air are special features. Each tested for



noise—decibel ratings available. Sizes for any ventilating problem in single, two-propeller, and multi-blade models. Hartzell Propeller Fan Co., Piqua, Ohio. 197

G. E. WALL CABINET FAN. Exceptionally quiet; delivers 500 cu. ft. of air per minute. Operates on 110-120

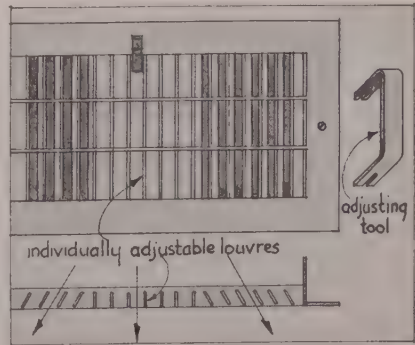


volts, 60 cycles, drawing 30 watts. Blades of aluminum. Welded steel wall box; inside plate chrome, outside plate green enamel. Outside weatherproof shutters close when fan is turned off by pendant chain. General Electric Co., Schenectady, N. Y. 198

RANGE-VENTOR. This threefold home utility consists essentially of a rust-proof, enamelled steel range canopy, size 42" x 27" x 11", with a built-in electric fan for forcing through a flue, duct, or opening in the outside wall all heat and fumes from cooking rising up and being captured by the canopy. Socket for light to provide direct illumination on working surface included. Motor: inductive type, radio interference free, 110 volts, a.c. Exhaust pipe size, 6". Colors: white, ivory, green. Trimmed with chrome rail. Universal Blower Co., Birmingham, Mich. 199

CADWELL CONTROL UNIT. Feeder valve, relief valve, back-pressure valve, ball check and screen—all in one unit for hot-water heating systems. Closed by internal pressure of system rather than by spring. Adjusted at factory and sealed. Easily tested. Cleaned without losing water. The Beaton & Cadwell Mfg. Co., New Britain, Conn. 200

DIRECTED AIR FLOW REGISTER. Enabling complete control of air-flow direction through register or grille. Directional adjustment made or changed after installation. Two patterns have the adjustable louvers running horizontally and vertically, respectively; horizontal bars can be set to deflect air up or down, or in any combination; the vertical-bar type, to deflect right or left or a combination of both. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y. 201



30-F. Temperature Regulation, Air Moistening and Conditioning

ACRATHERM. Type T10. Newly designed room thermostat. Series 10 wiring. Opens circuit on temperature rise as required. Range 55° to 85° F. Factory differential setting, 1½°. Detachable wall plate to which wiring connections are made after it is screwed to wall. Thermometer underneath cover. Cam adjustment can be locked. Silver-finish case. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

202

ACRATHERM. Type T11. Heat accelerated. Series 10 wiring. Utilizes a "metal sponge," delaying delivery of heat to the thermal element for sufficient time to assure efficient burner operation. Heat once delivered, it is retained long enough to prevent undesirable short-cycling. Not available for d.c. Available with locking device. Factory differential setting, 3°. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

203

MINNEAPOLIS-HONEYWELL TIMERE-LAY. R153-1, Series 10 wiring. For coal-burner control in conjunction with thermostat. Never takes the command of heat away from the thermostat—its function is to keep fire alive, which it does without creating uncomfortable room temperatures. Permits varying length of stoking interval from ½ to 7½ min. Provides for operation at half-hour or hour intervals. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

204

ELECTRIC JANITOR. New development in regulation of coal-fired heating plants; control operates on any hot-water, steam, vapor, or warm-air domestic system. Includes a heat-leveling room thermostat, damper motor, separate transformer, and all necessary wiring, etc., for complete installation and adjustment. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

205

CADWELL RELIEF VALVES. For range boilers or storage tanks. Two-way (No. 35) and three-way (No. 25) thermostatic, with phosphor bronze diaphragm. Seat opening governed by internal pressure, not by spring. Adjustable manually; easily and quickly tested. The Beaton & Cadwell Mfg. Co., New Britain, Conn.

206

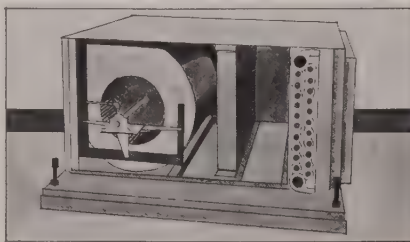
TIME-O-STAT. Types T100-1 and T200-1. Provide day-night operation in same manner as a one-day clock thermostat, and require setting each night at retiring time. Type T100-1 for use with Series 10 thermostats or any series 80 2-wire low-voltage control; while Type T200-1 is for use with Series 20 equipment. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

207

TRANE HUMIDIFIER. A cabinet-type humidifier for use in conjunction with steam or hot water systems (where water temperatures exceed 150°) for all type installations. Completely automatic and requires no attention whatsoever. The cascade-type humidifier is used in conjunction with the Trane heating coil. The Trane Co., La Crosse, Wis.

208

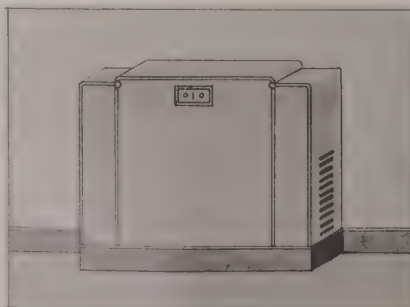
IMPROVED TRANE CLIMATE CHANGER. Improved cabinet design and more compactness are the features. This unit for residential air conditioning is for use with either exist-



ing hot-water or steam heating systems. It is a complete package air conditioner. The Trane Co., La Crosse, Wis.

209

G. E. UNIT ROOM AIR CONDITIONER. Type FC-2. An entirely self-contained unit. The attractive cabinet houses the compressor, cooling coils, and all other equipment necessary to cool, dehumidify,



clean, and circulate the air of a room, all hermetically sealed in steel and trouble-proof. Requires no piping connections, and can be plugged into any electric outlet. With no water supply or drain connections required, no installation of wiring or piping, it can be moved when necessary. Quiet, free from vibration. Cooling effect equal to the melting of one-half ton of ice in twenty-four hours. Merely place it in front of a window, adjust the air duct to the window, and plug in. General Electric Co., Schenectady, N. Y.

210

L & N THREE-LEAD NULL-TYPE ELECTRICAL RESISTANCE THERMOMETERS. Air-duct, water-line, and room temperatures, needed to regulate an air-conditioning system for constancy of atmosphere, are measured reliably regardless of distances, and indicated or recorded automatically at a central point. Each equipment is individually engineered, easy to install, convenient, and requires little maintenance. Leeds & Northrup Co., 4901 Stenton Avenue, Philadelphia, Pa.

211

G. E. UNIT ASSEMBLY AIR CONDITIONERS. Type HC, for use in the field of central-plant air-conditioning systems, are built up from four sizes of standard frame and enclosure elements varying in height only. To house the desired heating coils, cooling coils, humidifiers, filters, etc., units are compact and provide the flexibility of assembling in a variety of combinations. General Electric Co., Schenectady, N. Y.

212

CLIMATOR CABINET-TYPE UNIT HEATER. For commercial and industrial space heating, and residences without basements. Heats, filters, humidifies, and circulates air. Gas-fired heating unit is installed in single compact assembly with fan installed below heating unit. Completely automatic operation. Four sizes, from 67,500 to 168,750 B.t.u. per hour and air delivery from 900 to 2250 c.f.m. Green prismatic lacquer finish. L. J. Mueller Furnace Co., Milwaukee, Wis.

213

MODINE HUMIDIFIER. A low-cost domestic air conditioner used in conjunction with a radiator-heating system. It humidifies, cleans, circulates the air heated by indepen-

dent radiator system; ducts to one or two first-story rooms; can be furnished with cooling coil for living-quarters cooling. Ordinarily installed in the basement, suspended from the ceiling. Modine Mfg. Co., Racine, Wis. 214

HORIZONTAL-TYPE AIR CONDITIONERS. Air conditioners of from $\frac{1}{10}$ to 30 tons of refrigeration capacity. Larger sizes provide year-round air conditioning—heating and humidifying in winter, cooling and dehumidifying in summer, filtering and circulation in all seasons. May be used for direct expansion of refrigerant into coils, or for circulation of refrigerated water through coils. York Ice Machinery Corp., York, Pa. 215

WESTINGHOUSE PORTABLE AIR-CONDITIONING UNIT. Mobile air-conditioning unit is a portable unit suitable for installation under windows or along walls. As no refrigerant lines are required, installation is simply a matter of providing cooling water supply and return lines for the condensing unit. The unit can be supplied with or without casters. For hotel rooms, residences, small offices, and stores. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 216

WESTINGHOUSE AIR-CONDITIONING UNITS. Type ES-05. Designed for suspended mounting on wall, ceiling, or shelf. Their compactness makes possible concealed mountings behind grilles, in walls or partitions. These units cool, dehumidify, and circulate the air for summer comfort. For Freon or chilled water. For offices, restaurants, stores, etc. Readily disconnected and moved. Connections are: refrigerant, drain, and electrical. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 217

DOMESTIC COAL STOKERS. Automatic coal burners, anthracite and bituminous, for bungalows and small flats. Fuel-hopper (500 lbs. capacity) stoker, underfeed screw type. Regular and de luxe model with time-clock, stack, and limit controls. Link-Belt Company, Stoker Department, 2410 West 18th Street, Chicago, Ill. 226

G. & M. STOKERMATIC. Quickly in-

WESTINGHOUSE AIR-CONDITIONING UNITS. Type ES-20, ES-40, ES-60 Series are available for suspension from ceiling or for mounting on platforms or decks. In models that cool and dehumidify the air in summer, heat and humidify the air in winter, and filter and circulate the air the year round. They are also available in models that provide either summer or winter conditioning. Freon or chilled water as refrigerant. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 218

WESTINGHOUSE AIR-CONDITIONING UNITS. Type EH Series. Floor type air-conditioning units, both low and high models, are suitable for installation along walls or in open areas. They are available in models which cool and dehumidify the air in summer, heat and humidify the air in winter, and filter and circulate the air. Supplied for Freon or chilled water. Operate with condensing or refrigerating apparatus. Two fans, two motors; spray-target humidification. Size, $38\frac{1}{2}$ " long, $13\frac{1}{2}$ " wide, 40" high. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 219

SIROCCO CONDITIONER. Series R. A complete air-conditioning system for the home designed to control the temperature, humidity, motion, and cleanliness of air. Built in four sizes with a normal air capacity from 1200 to 4200 c.f.m. Heating and cooling elements, humidifier, fan and filter contained in a steel casing, finished in beige lacquer, with chromium-plated fittings. American Blower Corp., Detroit, Mich. 220

SIROCCO CONDITIONER. Series B. Supplied in either floor or suspended ceiling type units. Cover in nominal ratings an air delivery from 1500 to 10,000 c.f.m. and refrigeration from 5 to 30 tons. Built in six sizes

to cover practically every requirement for a complete air-conditioning system in restaurants, etc. American Blower Corp., Detroit, Mich. 221

KATHABAR AIR CONDITIONING. Hot moist air is passed through a drying chamber in contact with cool Kathene liquid which absorbs moisture; this excess is driven off to outside air circuit. Gas-fired, it circulates, washes, dries, cools, heats, and humidifies the air. For industrial humidity control, or for comfort air conditioning where cool tap water or refrigerating equipment may lighten its load. Four sizes. Surface Combustion Corp., Toledo, Ohio. 222

DELCO HEAT CONDITIONAIR. Purifies, humidifies, automatically heats and circulates the air to all parts of the house—a complete change every ten to fifteen minutes. Burns lowest-cost domestic fuel oil. In summer, removes pollen and circulates purified, freshened air. Delco Appliance Corp., Rochester, N. Y. 223

GAR-WOOD No. 102 TEMPERED-AIRE UNIT. A combined automatic heating and air-conditioning system for homes of moderate size—five to eight rooms. Max. cap., 12,000 B.t.u. per hr. at the bonnet. Air delivery, 1575 c.f.m., max. Total friction, $\frac{1}{8}$ ". Filters, oil-heats, humidifies, and forces air circulation. Gar Wood Industries, Inc., Detroit, Mich. 224

PORTABLE AIR CONDITIONERS. Self-contained air conditioner for summer cooling and dehumidification only. Air cooling rather than water cooling of refrigerant condenser is used, so that no plumbing connections are necessary and unit is readily portable. Attractive cabinet and low price make it desirable for single-room applications. York Ice Machinery Corp., York, Pa. 225

30-G. Fuels and Fuel Feeds

stalled in any house-type furnace. Hopper type, using small-size coal. Feeding of coal and control of temperature entirely automatic. Built in eight sizes to handle loads up to 12,500 sq. ft. steam radiation. Clinker ash removed once daily with tongs. The Stokermatic Co., Salt Lake City, Utah. 227

RING-DRIVE IRON FIREMAN AUTOMATIC COAL BURNER. Eliminating

hand-filled coal hoppers. In domestic sizes, automatically feeds coal direct from bin to furnace. Different machines are available for anthracite and for bituminous coal. Automatic ash removal equipment is an integral part of the anthracite models. Wide flexibility makes possible installations to fit the most diverse requirements. Iron Fireman Mfg. Co., 3170 W. 106th Street, Cleveland, Ohio. 228

31. Electrical

EXIDE EMERGENCY LIGHTING CONTROL UNIT. 60-ampere capacity. Designed for operation from single-phase, 60-cycle, 115-230-volt, three-wire a.c. supply. Lighting load automatically transferred to 60-cell glass-jar type of battery, and automatically returned to a.c. supply upon restoration of service. Kept charged automatically. Length, 41"; depth, 13"; height, 25½". The Electric Storage Battery Co., Allegheny Avenue and 19th Street, Philadelphia, Pa. 229

TRANSFORMERS AND REACTORS. For use with 400-watt mercury lamp. The use of a transformer with high internal reactance, or a reactor to provide the necessary high-starting voltage and somewhat lower operating voltage, results in a reduced power factor. Transformer-Capacitor or Reactor-Capacitor units are available to correct this condition. These consist of two-compartment cases, with the transformer or the reactor mounted in the lower compartment and the capacitor in the upper compartment to provide a power factor of 90 to 95 per cent. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 230

AUXILIARY ELECTRIC RELAYS. Type SG relay can be used for remote control of heavy circuits and would save long runs of heavy copper wire. Open type may be easily installed in metal box. Relay simple in design and can be completely dismantled in a few minutes. With two-make, or one-break and one-make contacts. For a.c. or d.c. use. Up to 550 volts a.c., or 440 d.c. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 231

BUILDING-TYPE CONTROLLER. Type O-1. A new line of motor controllers, built with the electrical details factory-assembled and wired on a common panel readily demountable from the enclosure. The back plate alone is mounted in place while the wiring is being roughed in, thus serving as a pull plate; later on after heavy construction work is completed the controller panel is set in place. After the line and motor connections are made, the enclosing cabinet is put on and the job is done. Wall or floor mounting. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 232

ELECTRONIC CONTROL OF LARGE SYNCHRONOUS MOTOR-DRIVEN COMPRESSORS. A new device employing an electronic tube, developed for use in conjunction with synchronous motors driving reciprocating compressors. Where two or more similar compressors are used, this device prevents the compression strokes on the different compressors occurring in unison and thus effectively reduces the magnitude of the current pulsations. The current pulsations should be kept small to reduce the possibility of flicker in the lights or interference with the operation of other electrical equipment. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 233

NEW BROWN AIR-OPERATED CONTROLLERS. Recording and indicating, for temperature, flow, pressure, and liquid level. "Air-o-line" corrects for magnitude, rate, and direction of departure from control point; will maintain an industrial process. Thermometer-type temperature controllers for -40° F. to +1200° F.; potentiometer-type for -300° F. to +3400° F. Flow and liquid level controllers of inductance-bridge type and mechanical type. Pressure controllers from 30" vacuum to 3000 lbs. per sq. in. pressure. The Brown Instrument Co., Philadelphia, Pa. 234

INDUCTION VOLTAGE REGULATOR. A low-cost induction regulator that can be used in large commercial buildings to maintain satisfactory voltage regulation. Designed specifically for the lower capacities. Mechanical parts reduced to suit a maximum rating of 24 kva, instead of 60 kva. Permits use of a smaller motor and elimination of the brake. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 235

NEW 100-150 AMPERE CONTRACTORS. For motor control, utilizing the de-ion principle of arc quenching, which confines the flame within the arc chamber, permitting compact design and close electrical clearances. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 236

NEW 15-25 AMPERE CONTRACTORS. These contractors for motor control are of the vertical-lift solenoid type, mounted on a steel base with all parts accessible from the front.

Double-break silver contractors are used. The de-ion method of arc quenching insures greater safety, reliability, and reduced maintenance, providing the most effective arc-rupturing principle ever applied to motor starters. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 237

COMBINATION LINESTARTERS. The assembly of a motor starter and motor-circuit switch in one cabinet; results in material savings in space and wiring costs, and improves the appearance of the installation. Westinghouse has made a further improvement by incorporating the No-Fuse circuit breaker in combination Linestarters, resulting in increased safety and substantial savings in fuse-renewal costs. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 238

NEW DE-ION LINESTARTERS. New and improved magnetic across-the-line starters for a.c. motors for driving pumps, fans, and compressors. They provide overload and low-voltage protection, and feature new contractors utilizing the "de-ion" principle of arc interruption. Contractors cannot be jarred closed. Stream-line steel cabinets finished in baked black enamel harmonize with modern interiors. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 239

ELECTRIC ENTRANCE SERVICE. The service equipment to any new home should be adequate for at least 60-ampere service. This includes the entrance-service conduit, wire or cable, meter, main line switching equipment, and distribution board. Furthermore, a cable service should be extended to the kitchen with a range plug. An outside detachable meter with no-fuse load center and range plug, with extra service for electric water heater, would be ideal and economical. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 240

G. E. PANEL-MOUNTING ROTARY CONTROL SWITCHES. Type SB-1. Improvements have been made which have lengthened their life and made them still more reliable in operation. In a special test one of these switches was operated 550,000

times under load without failure. These switches have silver contacts, positive action Textolite cams to operate the contacts, and insulating covers. The escutcheon and handle are of polished black Textolite. General Electric Co., Schenectady, N. Y.

241

G. E. CIRCUIT BREAKERS. Automatic reclosing has been applied to large electrically operated air-circuit breakers, such as the Type AL-2. If the breaker opens on overload or short circuit while the operator is absent from the switch-room, power is not cut off until the operator returns. The recloser will reclose the breaker, either at once or after an interval of twenty seconds, depending on the setting. If the breaker reopens, the recloser makes two more attempts to restore power. General Electric Co., Schenectady, N. Y.

242

G. E. SWITCHBOARD PANELS. A new method of wiring G. E. switchboard panels gives a much neater appearance to the back of the board and also makes changes in the wiring much easier. All wires are run in covered vertical troughs made of perforated steel, with horizontal runs to the studs of the instruments. No cleats are used, making it very simple to add to the wiring or change it. General Electric Co., Schenectady, N. Y.

243

G. E. HEAVY-CURRENT KNIFE SWITCHES. Type LP-1. A new series with ratings up to 4000 amperes. In the past such switches have been difficult to operate because of the friction in the large contact surfaces which were necessary. This has been overcome by using line contacts which also carry the current better. As an additional feature the contacts are surfaced with silver, which is a better electrical conductor than copper and does not become coated with non-conducting oxide film. General Electric Co., Schenectady, N. Y.

244

CIRCUIT BREAKER FOR OUTLET-BOX MOUNTING. Made with a sealed-in rust-proof mechanism; is tamper-proof and positive in its action, and is not affected by vibration or shock. It provides short-circuit and overload protection for 125-volts a.c. or d.c. circuits and can also be used as a switch control for branch circuits. May be installed singly or in gangs in a standard 4" square outlet box with a raised cover and

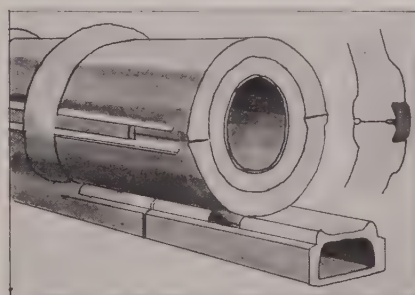
brass plate. Thus mounted, its external appearance resembles that of a flush tumbler switch and plate. The mechanism cannot be "locked" by the handle while the circuit is overloaded. General Electric Co., Schenectady, N. Y.

245

ELECTRUNITE BENDING SYSTEM. For making accurate stubs, back-to-back bends, offsets, etc., in Electrunite Steeltube conduit, with hand pipe benders or "hickeys"—a few simple tools. Eliminates guess measurements, makes neater installation. Steel & Tubes, Inc., 224 East 131st Street, Cleveland, Ohio.

246

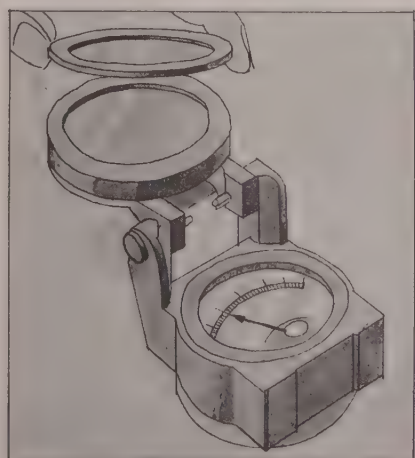
RIC-WIL SUPER-STRENGTH TILE CONDUIT. For underground steam pipes, especially under highways



(not railways). Internal drain, lock side joints, external pipe supports, interlocking construction. Pipe insulation type, optional. The Ric-wil Co., Cleveland, Ohio.

247

LIGHT METER. Type PX-20. An instrument for measuring the lighting efficiency of fixtures and wall reflecting surfaces. Uses a recently developed photo-voltaic cell, which changes light directly to electric current without any auxiliary electric supply. Closed, it measures 2 1/2" x 2 3/4" x 2 1/2"; weighs 10 oz.



Scales to 50-foot candles; multiplying disc added over cell increases reading from 50 to 500 foot-candles. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

248

THE NEW FIRE-EYE. Fire-detection device, 4" diam. and projecting 1" from ceiling, wired to send alarms where desired, turn on sprinkler system, etc. Sealed in glass, contacts are not corrosive. Automatically resets, permitting tests as desired. The Holtzer-Cabot Electric Co., Boston, Mass.

249

ELECTRIC EYE—GENERAL PURPOSE LIGHT SOURCE. Type LE photo-relay can be used for burglar protection, such as turning off and on outside lights, and other various schemes for safety, such as at driveways and garage doors; also for counting traffic and articles; open and close doors, start and stop machines. These relays are identical in size and mounting for a. c. and d. c. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

250

BATHROOM HEATER. Convection type, with electrical heating element which never becomes red hot and does not have to be replaced at frequent intervals. Lattice register face finished in monel, chrome plate, or vitreous enamel. 1000 and 2000 watts on three-heat switch. 20" x 15" face; 4 1/4" depth—and other sizes. The Prometheus Electric Corp., 401 West 13th Street, New York City.

251

SOVEREIGN (MODEL G-17) G.E. AUTOMATIC RANGE. Table-top design for flush against wall and adjacent cabinets. Vented through back splasher. White porcelain enamel. Automatic temp. control. Floor space, 42" x 25"; height over all, 43". General Electric Co., Cleveland, Ohio.

252

TOWEL DRYER. A scientifically designed warmer for installation in the pantry to stand clear or else built in, as may be more advantageous. It comes in a variety of sizes and finishes. It may be thermostatically controlled, finished inside in chrome. Approved by the Board of Fire Underwriters. The Prometheus Electric Corp., 401 W. 13th Street, New York City.

253

OHIOAN ELECTRIC RANGE. Model No. 1450CAB. Cabinet type in white, ivory, ivory with black mar-

ble veins, ivory with green marble veins, or black with ivory veins. Four 8" open or enclosed burners, or one 6" substituted. Oven, 16" x 18" x 14" high. Toe-space base. Drawers operate on rollers. Floor space, 45" x 23", 36" high. The Standard

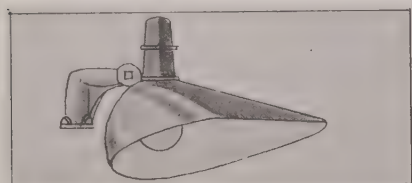
Electric Stove Co., 1712 No. 12th Street, Toledo, Ohio. 254

PLATE WARMER. For installation in pantry, built in or to stand clear. Chrome-plated hardware and trim; vitreous porcelain doors. Thorough-

ly insulated with asbestos. Overheating impossible. Three-heat switch; thermostatic cut-off if desired. Approved by Fire Underwriters. Four sizes. The Prometheus Electric Corp., 401 West 13th Street, New York City. 255

31-F. Illumination

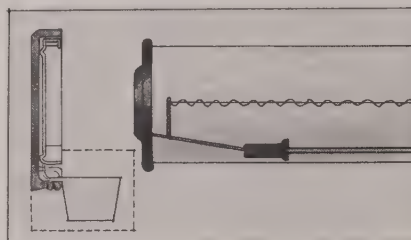
G. E. OPEN-TYPE FLOODLIGHT. Type AL-46. A new, inexpensive open-type floodlight, especially designed for lighting service stations—driveways and buildings. Strongly built of sheet steel and cast aluminum, with a double fire-enamel finish. Soap and water will restore the white porcelain enamel reflecting surface to its original condition. An auxiliary parabolic reflector of



aluminum with Alzak finish (either etched or polished) is available, with which a more or less concentrated beam can be superimposed upon the general distribution of light from the unit. General Electric Co., Schenectady, N. Y. 256

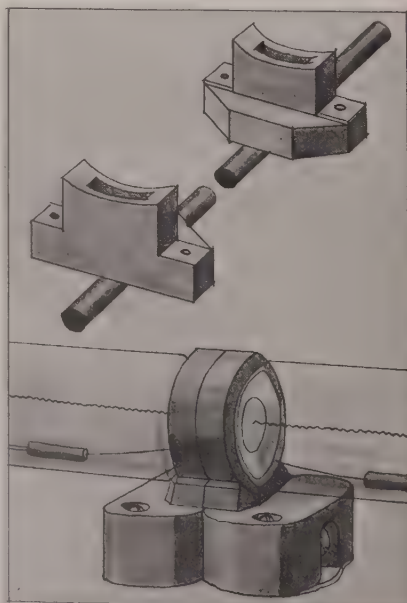
MAZDA INDIRECT-LITE LAMP AND THREE-LITE LAMP. Designed to meet need for better lighting in the home. Inside frosted, with bulb diameter of 3 3/4". Indirect-Lite is 6 1/2" overall, with medium screw base; consumes 250 watts. Three-Lite has 100-watt and 200-watt filaments, operated separately or together; overall length, 6 3/4". General Electric Co., Schenectady, N. Y. 257

G. E. MAZDA LUMILINE LAMP. Tubular in shape, its most outstanding characteristic is a contact base at each end, making it possible to achieve practically a continuous line of light when several lamps are placed end to end. A new technique is employed in connecting the special chrome-iron contact caps directly to the ends of the glass tube, without the use of basing cement. Single coiled filament, supported by a channel backbone. Supplied in 12" and 18" lengths. The 100-120-volt lamps are made in wattages of 30



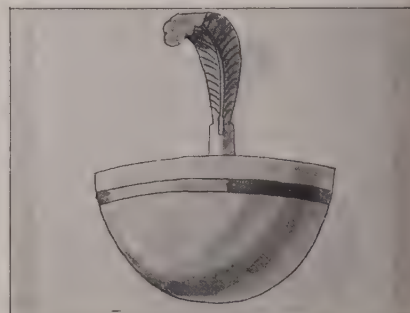
and 60 in the 18" length; 40-watt lamp made only in the 12" length. Lamps are furnished in white, straw, orange, moonlight blue, emerald, and surprise pink colors. General Electric Co., Schenectady, N. Y. 258

LUMILINE LAMP BASES AND CAPS. For use with the Lumiline lamps for built-in or built-on illumination. Two types of bases and caps, one type of base being side wired either for surface or flush mounting, and the other for flush mounting only. In the former, wires are looped around a side binding screw, and in the back-connected type wires may be run straight through. Bases and caps are available in either black or white Textolite. General Electric Co., Schenectady, N. Y. 259



ELECTRIC DISPLAY and SIGN MATERIAL. Neon tube and raised glass letters in combination. Union-made and approved by fire underwriters; built under one-year guarantee. Flexlume Corp., 1100 Military Road, Buffalo, N. Y. 260

BEARDSLEE LIGHTING FIXTURES. Many new designs for Colonial and Early American period work. No.



35052 (illustrated), antique white and gold; extends 4"; width, 9"; crystal glass plume; key socket; up to 60-watt lamp. Beardslee Chandelier Mfg. Co., 216 So. Jefferson Street, Chicago, Ill. 261

UNIVERSAL FLOODLIGHT. Types A-16 and A-14 are short-range, high-wattage floodlights, ideally adapted for installations wherein the cost of standard enclosed floodlights is not justified. They are also desirable where a reasonable amount of beam control is necessary, and where light weight is advantageous. This applies particularly to general construction work that requires night work to meet contract dates, emergency work, such as repairs, and small athletic fields. These floodlights are also perfectly suited for the floodlighting of service stations. Type A-14, 300-500 watts; Type A-16, 750-1000 watts. Westinghouse Electric & Mfg. Co., Edgewater Park, Cleveland, Ohio. 262

CHASE LIGHTING FIXTURES. Stock fixtures in a custom-made quality. New patterns in authentic period de-

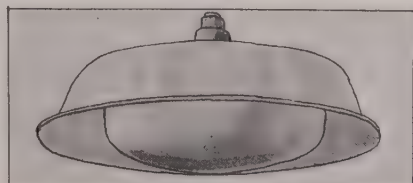
signs, including Early American, Early English, Federal, Georgian, Empire, American Adaptation, and Classic Modern. Chase Brass & Copper Co., Waterbury, Conn. 263

COMBINATION MERCURY-MAZDA TROUGH-LIGHTING UNIT. Consists of a trough reflector with louvers for directing a portion of light to ceiling, and pressed lenses for directing the light below. Current-limiting accessory mounted on upper housing. Capacitor mounted separately. Mixture of yellowish and bluish lights produces approximate daylight. New 400-watt high-intensity mercury lamp with 500-watt Mazda. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 264

HIGH, MEDIUM, AND LOW MOUNTING REFLECTORS. For high-intensity mercury lamps. Units consist of an 18" diameter etched aluminum reflector of the one-piece type. The reflector surface is acid etched, of diffuse character. There are three types: namely, a high, medium, and low mounting. The high mounting should be used for mounting heights of 40' to 60', the medium for heights of 25' to 40', and the low for heights of 18' to 25'. The spacing should be

arranged according to the intensity desired and never more than the mounting height. The outside surface is finished in a green baked enamel and various styles of glass covers are available when desired. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 265

GLASSTEEL DIFFUSER FOR MERCURY LAMP. Unit consists of a 24" diameter one-piece porcelain-enamelled



steel reflector. A Monax single-layer homogeneous glass globe surrounds the lamp and is attached to the reflector. Six openings in the top of the reflector allow some diffused light to pass through in order to reduce the dark area above the reflector and give height to the room. This unit, with a 400-watt lamp, is suitable for mounting heights of 11 to 20 ft. and provides a fan of evenly diffused light over a wide area. The

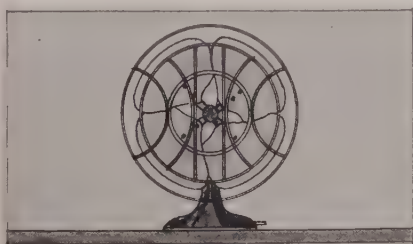
diffusing globe minimizes the high brightness of the lamp. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 266

G. E. HIGH-INTENSITY MERCURY-VAPOR LAMP. Inner tube 7" long, 1 3/8" diameter, enclosed in an outer bulb with intervening space filled with low-pressure nitrogen to prevent too rapid heat dissipation. Outer diameter, 2"; overall, 13". Special features for starting are included in bulb. Will operate on 230-volt a.c. circuit with a choke coil. Consumes 420 watts. Rated at 14,000 lumens. General Electric Co., Schenectady, N. Y. 267

MULTILUX SENIOR LUMINAIRE. Designed for use with Mazda, sodium, or mercury lamps on boulevards, main thoroughfares, subways, yard lighting, etc. The luminaire consists of a cast-aluminum or cast-iron body of attractive design with a pear-shaped globe which produces symmetrical distribution of light. The overall dimensions of the luminaire, including the globe, are approximately 23" long by 16 3/4" diameter. The finish is aluminum or green paint. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 268

31-H. Motor-driven Equipment

NEW G.E. ELECTRIC WORKSHOP. Motor-driven combination for wood and softer metals: circular sawing, scroll sawing, lathe, sanding, drill, mortising, grinding. No belts or pulleys. Floor space, 18" x 38". For amateur craftsman and small professional shop. General Electric Co., Cleveland, Ohio. 269



(1) by inducing forced circulation of air through the attic during the day; and (2) by drawing the relatively cool outside air through the living quarters late in the day and in the evening. General Electric Co., Schenectady, N. Y. 272

G. E. WASHER. AW-25P. In a square steel cabinet, white-lacquered, which completely conceals the black porcelain-enamel washtub and the pump and wringer shaft. New-type activator of aluminum alloy. The wringer can be placed in eight different positions, with one control bar operating the entire wringer. Activator and pump operated by foot controls on front and side. Other features include: heat indicator; impeller-type pump; 1/4 h.p. motor, permanently lubricated. General Electric Co., Schenectady, N. Y. 270

sizes. Specially designed blades and motor make it exceptionally quiet. In ebony black and silver gray. Blades of aluminum, treated and enamelled black. Wagner Electric Corp., 6400 Plymouth Avenue, St. Louis, Mo. 271

NEW "STANDARD" ELECTRIC DISHWASHER. Cast iron, enamelled inside; shelf-back sink. Revolving basket type. Motor, 1/4 h.p. Mechanical unit—motor, pump and mounting plate—can be readily detached and exchanged at low cost for new unit. Standard Sanitary Mfg. Co., Pittsburgh, Pa. 273

WAGNER ULTRA-QUIET STYLED FAN. Oscillating type in 10, 12, 16 in.

G. E. AIR CIRCULATOR, TYPE HV-1. Consists of a flexibly mounted motor connected directly to a quietly operating propeller-type fan, assembled in a sturdy and attractive cabinet set on adjustable rubber-cushioned legs. Finish, a durable gray with nickel trim. It is designed primarily to be installed in attics of homes to induce comfortable conditions in hot weather in two ways:

BURKS SELF-PRIMING ROCK GARDEN PUMP. For recirculating water through fountains, falls, and other garden water features where city water costs prohibit waste. Also for cleaning coils, etc. Overall, 20" x 6 1/2", 9" high. All-bronze construction. Total head, 12' to 69'. Has 1/2 h.p., a.c., s.p., 60-cycle, 110-220-volt motor. Decatur Pump Co., Decatur, Ill. 274

NEW G. E. CEILING FAN. A 52-inch inverted ceiling fan, the blades being above the motor; operates on 115 volts, 60 cycles, and draws 125 watts. Air capacity of 7000 cu. ft. per minute. The motor is so designed that

the blades can be attached to the top side of the rotor. Blade holders reversible, so they can be mounted

to move air up or down. Lighting attachments and switch controls installed or changed without removing the motor from the ceiling. General Electric Co., Schenectady, N. Y. 275

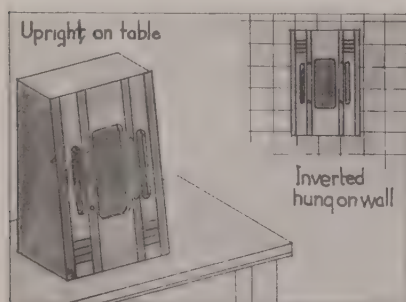
31-I

Signalling and Communicating Systems

G. E. COMMERCE CLOCK. Thinner and more graceful in appearance than the conventional surface-type commercial clock. Its stamped metal case is available in either statuary bronze or black finish. Motor is self-starting, silent and accurate. Gears are sealed in oil. No winding, no oiling, no regulating. Eight-foot cord is permanently attached. Convex crystal provides visibility at all angles. May be plugged into any a.c. outlet or into a concealed outlet in the back of the clock. Available in 12" dial size. General Electric Co., Schenectady, N. Y. 276

G. E. INWALL CLOCK. A flush, wall-type commercial clock of attractive design. When installed, the clock case lies flat against the wall, the mechanism being concealed within an outlet box (G-E SP-72171) recessed into the wall. The usual outside cord and plug are thus eliminated. Motor is self-starting, silent, and accurate. Gears are sealed in oil. Polished solid chrome alloy case. Available in 12" and 8" dial sizes. General Electric Co., Schenectady, N. Y. 277

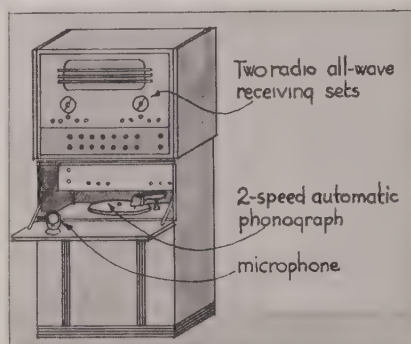
WALL OR PORTABLE LOUD-SPEAKER CABINET. Model MI-6285—a walnut cabinet for use in schools, hospitals, hotels, etc. Stands on table



WESTINGHOUSE CONDENSING UNITS. Designed especially for air-conditioning service and for use with Freon. These units are all especially compact. No belts or pulleys are used, which reduces maintenance and

or mounted in reverse position on wall to project sound downward. Height, 14½"; width, 12½". Smaller size, Model MI-6280—12½" x 10½". RCA Mfg. Co., Inc., Camden, N. J. 278

SCHOOL SOUND SYSTEM CENTRAL CONTROL CABINET. Of walnut, containing controls for announcements or programs distributor to maximum of 80 rooms. Microphone



input, 2 all-wave receivers, 2-speed automatic phonograph. Width, 42"; height, 73¾"; depth, 18½". Top and bottom sections available separately for special applications. RCA Mfg. Co., Inc., Camden, N. J. 279

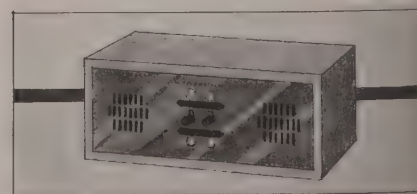
WESTERN ELECTRIC RADIO FREQUENCY DISTRIBUTION SYSTEMS. Developed to meet the requirements of apartment houses, hotels, and other multiple-family buildings, faced with the problem of providing antenna facilities for any number of radio receiving sets. Fundamentally, the function of these systems is to form a connecting link between a single antenna and a number of radio receivers (up to 3000), by means of which radio signals, collected by the antenna, are conducted

without loss or impairment to each receiver. Western Electric Co., 195 Broadway, New York City. 280

RCA VICTOR PORTABLE PUBLIC ADDRESS SYSTEM. Model PG-62D is designed for amplification of voices and music. Combines microphone, 20-watt amplifier and two electrodynamic speakers, with wiring and connections in case about 12" high, 24" long, 10" deep. Suitable for audiences up to 2500. Also Model PG-63B, of somewhat smaller size and capacity. RCA Mfg. Co., Inc., Camden, N. J. 281

NURSES' SIGNAL 'PHONE SYSTEM. A modern method of nurse-patient contact, uniquely combining sound and signal service. New flush-type patient station is installed within wall. Embodies quiet, clear-toned loudspeaker, and sensitive long-range microphone. Dictograph Products Co., Inc., 580 Fifth Avenue, New York City. 282

TELEMATIC, JR. Interior telephone system. Executive station equipped with microphone, no handset; other stations have French type handsets. Instantaneous connections without dialling, number system, or switchboard. Inside communication without breaking outside telephone contact. Serviced and maintained for five years. Dictograph Products Co., Inc., 580 Fifth Avenue, New York City. 283



32. Refrigeration

noise. The high-speed operation of the compressor provides more capacity for the space occupied. They are manufactured with great pre-

cision, with all parts being carefully cleaned after machining. Air-cooled or water-cooled units are available in the following horsepower ratings: 1½, 3, 6 and 7½. The 15-20 horsepower ratings are available in water-

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cooled units only. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 284

HILL COLD-STORAGE DOORS. Complete line, including cooler doors, freezer doors, track doors, doors with windows, Dutch doors, vestibule doors, complete refrigerator fronts. In standard unpainted pine-front models with chromium-plated hardware, and also with finished oak, ash, or stainless-steel fronts. Floating panel construction; sheet cork insulation protected with waterproof paper. C. V. Hill & Co., Inc., Trenton, N. J. 285

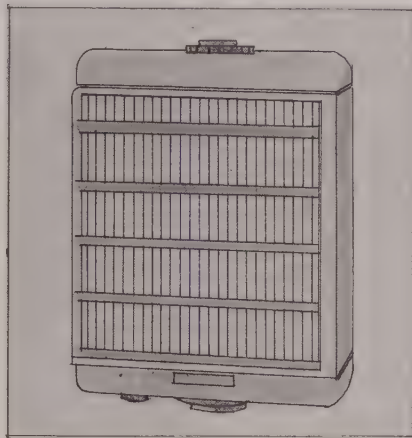
TRANE SMALL COOLING UNIT. A small propeller-type cooling unit for ceiling suspension in small stores, offices, vestibules, beauty parlors, and other small buildings. Low in cost, easy to install, and for use with either direct expansion or water as the cooling medium. The Trane Co., La Crosse, Wis. 286

HILL REFRIGERATORS. A new line of refrigerators for hotels, restaurants, and institutions made in a number of sizes and from one to six doors. Features include: exterior and interior of genuine vitreous porcelain, the interior having rounded corners; rubber door jambs, chromium-plated brass hardware; 3 inches of sheet cork covered by 1/2 inch of insulated board for insulation; 6" legs, removable for clearance. C. V. Hill & Co., Inc., Trenton, N. J. 287

CONDENSING UNIT FOR REFRIGERATING. Eight new units of from 1 1/2 to 20 h.p., and rated at from 1.8 to 21.5 tons refrigerating capacity. Types CM-6IS, CM-8IW, and CM-8IS are equipped with water-cooled double-tube counterflow condensers; the others, CM-8IL, two of CM-9L, and two of CM-10L, having

shell-and-tube condenser receivers. External motors. Shipped with a charge of Freon. General Electric Co., Schenectady, N. Y. 288

MODINE UNIT COOLERS, COLD-WATER TYPE. Not only make possible both cooling and heating with a single unit, but by their use cold-



water cooling may be combined with hot-water or steam heating. This type of unit uses a refrigerant, deep-well or tap water, water pre-cooled with ice or alcohol, glycerine or any other non-corrosive anti-freeze solution. Equipped with motor and fan. Modine Mfg. Co., Racine, Wis. 289

HEAVY-DUTY FREON REFRIGERATING MACHINES. Large-capacity refrigerating machines for Freon refrigerant in air-conditioning installations for office buildings, department stores, theatres, large restaurants, etc. These compressors may be either direct driven by synchronous motors, or belt-driven. York Ice Machine Corp., York, Pa. 290

MODINE COOLING COILS, COLD-WATER TYPE. Intended for use in central system cooling plants, in connection with blower fans and

duct work, where cold water or non-corrosive brine is used as a cooling medium. Mechanically this equipment broadens the scope of cold-water cooling. All copper except steel enclosing frame, and the tin and lead used to bond fins to tubes. Sizes for all purposes. Modine Mfg. Co., Racine, Wis. 291

MODINE UNIT COOLERS, DIRECT EXPANSION TYPE. Designed for installation with a compressor, either air or water cooled, and use Freon, methyl chloride, sulphur dioxide, or any other common refrigerant except carbon dioxide, as the cooling medium. Three sizes: 1 ton, 2 tons, 3 tons ice-melting equivalent when refrigerant temperature is 25°; entering air, 85°. Customarily suspended from ceiling. Modine Mfg. Co., Racine, Wis. 292

NEW TRANE PRODUCT COOLER. A small, easily installed product cooler for use in walk-in boxes, produce storage rooms, refrigerated trucks, and other small refrigerated spaces, having coils so designed that defrosting problems are overcome. A feature of the unit is that it may be installed easily and moved in case of building changes with very little difficulty. The Trane Co., La Crosse, Wis. 293

FREON REFRIGERATING UNITS. Self-contained automatic refrigeration condensing units of 1/4 to 25 h.p., using the refrigerant Freon which is especially adapted to air conditioning, and now also widely used in these machines for commercial refrigeration. Units are compact, efficient, and reliable. Sizes below and including 10 h.p. are single compressors with two or three cylinders, while 15, 20 and 25 h.p. machines are duplex. York Ice Machine Corp., York, Pa. 294

33. Elevators, Dumbwaiters and Accessories

ST. LOUIS ADJUSTABLE AND RENEWABLE FREIGHT-ELEVATOR DOOR GUIDE SHOE. An entirely new type of guide shoe, on all of our doors, which is adjustable to take up and minimize the excess side play in the doors, which is so essential to smooth, easy operation. The removal of a secondary component part of the shoe and the replacement of it with a new part, renews

the life of the shoe. St. Louis Fire Door Co., St. Louis, Mo. 295

OTIS LIGHT-DUTY ELECTRIC PASSENGER ELEVATOR. For large residences. A newly designed machine for light service at considerable saving in cost. Machine located overhead, usually requires space no larger than the hatchway, and weight is about one-half that of machines

heretofore used. Duty is 750 lbs. at 100-ft. speed or 1000 lbs. at 80-ft. speed. Two or three phase alternating current. Several forms of automatic push-button control, improved electrical and mechanical features. Otis Elevator Co., 260 Eleventh Avenue, New York City. 296

ST. LOUIS ELECTRICALLY OPERATED COUNTERBALANCED FREIGHT-ELE-

VATOR DOORS. A combination of freight-elevator doors with especially designed and adapted electric-operating units placed inside the elevator shaft, taking up no more room in the

hatch than is customarily provided for when freight-elevator doors are necessary. Types of operation avail-

able are from manual pushbutton to full automatic. Car gates, in conjunction, are either manually or automatically operated. St. Louis Fire Door Co., St. Louis, Mo. 297

34 Power Plant

AUTOMATIC CONDENSATION UNIT. Model GU. Pump, ball-bearing; bronze impeller; rigid frame. Direct connected to electric motor. Complete with Armco iron tank or receiver, automatic controller. Mounted on iron base as complete unit. Capacities, 1000 to 40,000 ft. radiation. Kewanee Private Utilities Co., Kewanee, Ill. 298

WESTCO MIDGET CONDENSATION RETURN UNIT. Operates efficiently against 50 per cent variations (up or down) in head. Bronze-fitted, ball-bearing pump. Welded steel tank. Rugged; easily cleaned; compact; quiet. Handles large volumes steam and air. Simplex and duplex models. For layout up to 3000 sq. ft.

radiation. 20 lbs. maximum pressure. Westco Pump Corp., 26 Gaines Street, Davenport, Iowa. 299

WESTCO TYPE BR TURBINE PUMPS for all general duties. Removable liners offer "stand-by" protection at about one-fourth usual cost and assure lifetime service for pump casings. High pressures in single stage. Extremely simple. Low operating and maintenance costs. Compact; quiet. Sizes, 5 to 400 g.p.m. against heads to 1000 ft. Westco Pump Corp., 26 Gaines Street, Davenport, Iowa. 300

WESTCO UNIBILT TURBINE PUMPS for general building duties. Remov-

able liners. Automatically adjusts to head variations. Compact; quiet. Low operating and maintenance costs. Perfect hydraulic balance eliminates end thrust on motor bearings. Sizes, 2 to 90 g.p.m. Westco Pump Corp., 26 Gaines Street, Davenport, Iowa. 301

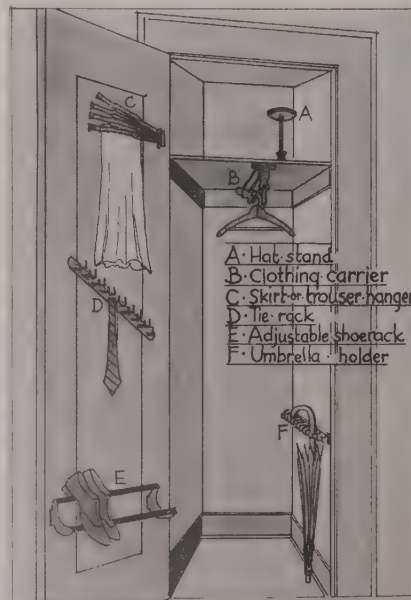
INTEGRAL-FURNACE BOILER. Co-ordinated steam-boiler unit for the power plant of small or large capacity. Burns pulverized coal, oil, or gas—alone or in combination. Water-cooled furnace construction. Co-ordination makes possible a reduction in number of headers and circulation tubes—therefore lower cost. The Babcock & Wilcox Co., 85 Liberty Street, New York. 302

35. Equipment

G. E. AUTOMATIC FLATPLATE IRONER. The inclined ironing board has 300 sq. in. of ironing surface. Pressure is between 350 and 400 lbs. A motor-driven thrust automatically lowers the ironing board and releases all pressure. Ironing temperatures range from 250 to 450 degrees Fahrenheit and are controlled by two thermostats mounted in the ironer shoe. Three Calrod heating units; moisture trap for condensed vapor; soft rubber easy-rolling casters; and a table top for converting the ironer into a kitchen table. Legs finished in green lacquer, the top in ivory. General Electric Co., Schenectady, N. Y. 303

ZIP-IN FRAMELESS SCREEN. A full-length window screen; top and bottom rails of bronze; no side rails. The top rail is fastened to the underside of the blind stop at the head with two screws. The bottom rail consists of two parts: one is fastened to the sill; the bronze wire cloth being attached to the other. By moving two slides a strong tension is put on the wire cloth, holding it firmly against the side blind stops. The Cincinnati Fly Screen Co., Gest and Evans Streets, Cincinnati, Ohio. 304

K-VENIENCE CLOTHES CLOSET FIXTURES: Clothing Carrier, Hat Holder, Tie Rack, Extension Shoe Rack, Extension Closet Rod, Trouser Hanger, etc. Nickel-plated accessories for neat and efficient use of all the closet space. Knappe & Vogt Mfg. Co., Grand Rapids, Mich. 305



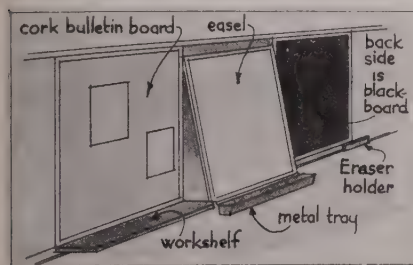
WATSON ECONOMY SCREENS. Frame of square-edged tubular Armco iron, electro-welded; corner miters gas-welded; rewirable. Wire-holding splines and channel guides for sliding screens are of a rustless zinc alloy. Frames galvanized and gray enameled. Watson Mfg. Co., Jamestown, N. Y. 306

ALUMINUM VENETIAN BLINDS. Made of flat or corrugated slats $2\frac{3}{8}$ " wide, and usually strung on aluminum ladder tape; will last indefinitely and can be finished in any color or colors desired. Acts as a retarder of heat from the sun's rays and is particularly effective on the outside of glass openings. The F. G. Wilson Corp., 11 East 38th Street, New York City. 307

VENETIAN BLINDS FOR CURVED WALLS. The development of a blind for the windows of the observation section of the stream-lined G. M. & N. train embodies several novel features. The curved blinds were made of aluminum, the straight window blinds of wood. The entire installation is rattle- and vibration-proof, because of special side guide construction. The tilting device embodies a new head bar construction, operable by merely push-

ing a knob at the center of the head valance. Simon Ventilighter Co., Inc., New York City. 308

AUSTRAL MULTI-USE BLACKBOARD FIXTURE. Combined work board, exhibition board of cork, display

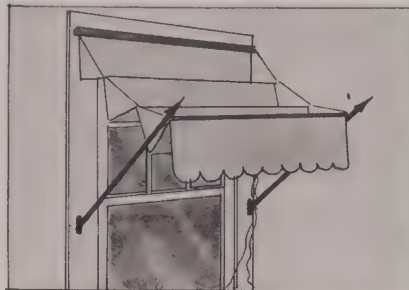


shelf, easel, with reversible panels. Work shelves attachable on brackets. Panels, 3' x 3' and 3' x 3' 6". Applied to standard plastered walls or over existing slate. Austral Sales Corp., 101 Park Avenue, New York City. 309



FOLDING METAL AWNINGS are permanent. Can be left up all year round. Are available in copper, aluminum, and specially treated corrosion-resisting steel, precision-made

of the finest materials. Operated by a cord over built-in pulleys. All movable parts are made of bronze. They act as ventilators. Metal Awning Corp., 19 East 47th Street, New York City. 310



35-H. Drafting Room

NORMA PENCIL. A mechanical four-color pencil, really four pencils in one, with which you can write in black, red, blue, or green. To change from one color to another is as simple as switching on or off an electric light. The Norma is a boon to all professional men needing pencils in several colors for their work. Scientifically constructed, fully

guaranteed, well made. Norma Pencil Corp., 150 Broadway, New York City. 311

WEBER PIGMENT DRAWING INKS. In fourteen opaque colors besides white and black; dry with a water-proof mat finish that will not crack or chip. For use in line or wash drawing, with pen, brush, or airbrush. F. Weber

Co., Inc., 1220 Buttonwood Street, Philadelphia, Pa. 312

CASTELL ARTIST'S PENCIL. No. 9022 has a knurled grip instead of the former smooth surface, giving a better grip for the fingers. It is a patented feature of A. W. Faber. A. W. Faber, Inc., Newark, N. J. 313

37. Insulation

ROCK WOOL. In three standard forms: loose, granular, and bats. From a new plant adjacent to their roofing-tile plant at Lexington, Ky. Ludowici-Celadon Co., 104 So. Michigan Avenue, Chicago, Ill. 314

RED TOP INSULATING WOOL. A mineral wool spun from a molten mass having the composition of pure glass. Contains no "shot" or non-insulating material. Clean, light, and of great resiliency. Furnished in 4"-thick bats and strips, also in bulk for blowing in. United States Gypsum Co., Chicago, Ill. 315

CAPITOL ROCK WOOL WALL-THICK BATS. Fitting between 2" x 4" studding on 16" or 24" centers; thickness, 3 5/8"; size, 15" x 23"; weight, 5 lbs. per cu. ft. or 1 3/4 lbs. per sq. ft. Thermal conductivity, .250. Fit snugly; cut readily to odd shapes. Flexible, resilient, permanent, fireproof. Deadens sound. Cuts temperature 8 to 15 degrees. Used in new construction or quickly applied in existing homes where

38. Landscape

DAVEY AERATION SYSTEM. Fill of earth, made over the roots of trees, during building construction or later, is almost sure to cause these trees to die. But grade levels around trees can be safely raised by installing an aeration system which will supply the tree roots with the air they require. A well around the trunk is seldom adequate. The Davey Tree Expert Co., Inc., Kent, Ohio. 319



37. Insulation

studs are exposed, as in attics. The Standard Lime & Stone Co., First Natl. Bank Bldg., Baltimore, Md. 316

INSULATING ROCKLATH. Regular 16" x 48" Rocklath for plaster base, but having, on the side placed against studding, an aluminum foil that provides insulating value equal to that of 1/2" insulation board. Fireproof and a smooth plastering surface to which gypsum plaster bonds. United States Gypsum Co., Chicago, Ill. 317

POREATHERM. An insulating material made of Portland cement with or without an addition of mineralized wood fiber. A neat Portland cement concrete made cellular by beating air into it in an ordinary mixer. The 19-lbs. per cu. ft. material weighs one-eighth as much as ordinary concrete. Also made in weight of 32 lbs. per cu. ft. Can be precast, but chiefly is poured in the field. Odorless, vermin-proof and fungi-proof. Porete Mfg. Co., Porete Avenue, North Arlington, N. J. 318



© Harris & Ewing

The Lincoln Memorial, Washington, with the Washington Monument and the Capitol on the axis. In the foreground is a floating music barge from which the Washington Symphony Orchestra gives summer concerts

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Tuesday, July 2.—Lunched with W. H. Butterfield, an architect who is now employed by the New York Park Department in charge of the restoration of the old Gracie Mansion. His experience in this work coincides with a feeling that has been growing among architects in recent years, namely, that the supervision side of architectural practice has been undergoing a decided change. The old days when the architect could really watch the composition of his concrete mixtures, check the electric wiring, examine piping connections, and all the other structural details, have gone. The job of supervision even of comparatively small work has become too complex for one mind. It is work better fitted to the engineer and the structural technician. The architect should be relieved of what has become for him an impossible task. Architectural supervision seems likely in the future to be very much more an advisory service concerned with the general intent of the drawings and specifications, color schemes, textures, and other intangibles more on the side of æsthetics than structural stability. There is no more reason for the architect's being burdened with these details than that his work should be terminated with the preparations of the drawings and specifications. Neither course is practicable today.

Wednesday, July 3.—The danger that threatened in the proposed remodelling of the United States Capitol seems to have passed, at least for the present. The House Committee voted ten to three to table the bill, which kills it for this session. Doubtless it will come up again, when those of us who believe that architectural monuments with such significance should be merely kept in repair and not "improved," should be ready with our weapons of defense.

Friday, July 5.—John T. Flynn has a sprightly article regarding the housing situation in *Collier's* for July 13—"Be It Ever so Prefabricated." There is plenty of real food for thought in this subject today. The present set-up of the building industry makes impossible, so far as we can see, the satisfying of a really sizable part of the population with decent shelter. The history of American industry shows that whenever there is a huge unsatisfied market, we eventually find a way to satisfy it. If the building industry, as at present organized, cannot do this, some one else probably will.

There is one important phase of the subject, however, which Mr. Flynn does not discuss, and that is the contention of many of our well-informed experts on housing, who believe that the answer to the problem does not lie along the lines of the detached house at all, but rather in properly designed, properly financed, and properly maintained large-scale housing where the unit is merged in the



The Editor's Diary

group rather than continuing under its own detached roof.

Saturday, July 6.—William Orr Ludlow thinks that the boxlike modernistic house never will become popular. While the prospective "homeowner is told that the modernistic style is more comfortable and economic, and that its design is reasonable and logical, nevertheless, people do not act according to reason or logic, but rather as influenced by sentiment. And the everlasting sentiment about the house one is going to live in is that it must be 'homelike.'"

Monday, July 8.—What makes concrete shrink? Professor R. W. Carlson, of the Massachusetts Institute of Technology, tells the American Society for Testing Materials that the factors having large influence upon shrinkage are:

"(1) Amount and quality of gel in the hydrated cement, (2) amount of cement paste in the concrete, (3) surface character of the aggregate particles as regards the ability to entrain air, (4) depth of the concrete below an exposed surface (this factor probably varies with porosity), (5) size of concrete specimen (this factor also probably varies with porosity), (6) plastic flow of cement paste (controlled somewhat by strength of paste), (7) humidity to which concrete is exposed, (8) direction, as related to direction of moisture movement, (9) size of aggregate, mainly as it affects water content, voids, and number of surfaces of contact between paste and aggregate, (10) time of exposure to drying (determined by duration of dry season for service structures), and (11) porosity of aggregate." Which would discourage me personally from trying to do anything about it.

Tuesday, July 9.—Pope Barney takes me to task for our criticism of the Juniata low-cost housing. He says it is to be criticized on many scores, but not for the rooms being too small and the rent too high. He says that such criticism reminds him of a job he lost because "Mrs. Client said all the rooms were too small and there were not enough of them and the house looked so awfully big that she didn't like it."

Wednesday, July 10.—When we quoted Harrie Lindeberg as saying that "every

practical architect knows that there is no such thing yet evolved as an inexpensive flat roof that will not leak," we rather suspected that we were in for an argument. John Theodore Haneman says, on the other hand, that he thinks it is the impractical architect who inherits the leaky roof, and calls upon the shades of the old brownstone fronts to bear witness to the fact that our forefathers managed to keep dry under tar and gravel. Haneman, however, objects vigorously to the nearly flat roof which is enclosed by a parapet, saying that this type seems only a petulant gesture against the flat roof, in that it will hide the existence of a sloping roof from every point excepting the far distant one. The Diarist hasn't the facts and evidence at hand in sufficient and convincing quantity to take sides on this issue. Nevertheless it seems to us that Mr. Lindeberg in his contention was speaking of the roof flat enough to be used as a deck—that being at least one of the chief factors that commend it to the functionalist designer. The question then comes down to whether the really flat useable roof that will not leak is as inexpensive as the gabled shingle, tile, or slate roof that might be considered inexpensive. Well, perhaps we shall have some facts and figures later to offer the jury.

Friday, July 12.—It was gratifying to see Harold R. Shurtleff of Boston elected at the recent Convention, A. I. A., to honorary membership in the Institute along with Carl Milles. The Institute honors itself indeed by recognizing the contributions of both these men to the art progress of America. Mr. Shurtleff improved his opportunity when he was appointed to determine a proper historical background for Mr. Rockefeller's restoration of Williamsburg, Va.

Saturday, July 13.—Wilbur Herbert Burnham apparently has no very exalted opinion of the architect's judgment with regard to stained glass. He says in the current issue of *The Stained Glass Quarterly*: "To my knowledge American artists in stained glass have always been handicapped by being forced to design and fabricate windows in accordance with the ideas of laymen, clergy, and architects, most of whom have never seen the great masterpieces in Europe and who do not even know the basic principles essential to the making of a window."

Incidentally, as Harry Leslie Walker was saying the other day, the whole problem of stained glass in a modern ecclesiastical structure is one of the most difficult and puzzling among the many that confront the architect. Most of the really capable designers and craftsmen in stained glass are individualistic both in their treatment of a subject and in their technique. The task of bringing the work of three or four of them into

something akin to harmony within one building, particularly when the results cannot be judged until they are in place, is one of the reasons why architects grow gray or bald early in life.

Monday, July 15.—The steady march of government-insured loans continues, reaching at the moment a grand total of over two hundred million dollars. The modernization and repair program has totalled about one hundred million dollars, with the mutual mortgage insurance program bringing the total up to more than twice that.

Tuesday, July 16.—It seems that we were a bit premature in our jubilation over the decision by the Supreme Court of New York upholding the right of the New York City Housing Authority to condemn slum land for low-rental housing (July ARCHITECTURE). While the law, therefore, recognizes the justice of such procedure in one State, the Sixth District United States Court of Appeals rules that: "The taking of one citizen's property for the purpose of improving it and selling it or leasing it to another, or for the purpose of reducing unemployment, is not, in our opinion, within the scope of the powers delegated to the government." The decision was a two-to-one verdict, with Judge Florence Allen sharply dissenting and holding that "the power of eminent domain may be exercised wherever necessary and proper for carrying into execution the power of taxation and appropriation for the general welfare. In the exercise of this specific power, the National Government may undertake those projects which benefit the health, the moral and the general welfare of the people. One such project is the elimination on a comprehensive scale of the slum." This decision would seem to be a formidable barrier against the rapid execution of the nation's evident wish to provide better living conditions for the low-income groups.

The way is not entirely closed, however, for the PWA Housing Division, could, according to Secretary Ickes, now seek to obtain land sites by the following methods: 1. By obtaining vacant land. 2. By building where the government can purchase land directly from the owners. 3. By turning over to local authorities the task of assembling land.

Thursday, July 18.—There has been considerable doubt as to whether the commonly accepted type of modern steel panel house would be considered a suitable risk for government insurance on the mortgage. A precedent has been set in the acceptance of a two-storied residence of this type now under construction in Chicago. The amount of the mortgage loan is \$12,500.

Friday, July 19.—Speaking of "behind the lines" employment, as we were

recently—the indirect labor created through construction—some figures come to light from the Federal Emergency Administration of Public Works. Indirect employment created by material production is three or four times greater than direct employment on the site, in the case of steel. Very little is known about these ratios of labor costs on the site to labor costs in prefabrication and transportation. These figures, it will be noticed, refer only to steel. The Bureau of Labor Statistics finds that approximately six tons of basic commodities are required for each ton of finished steel. Twenty-three hours of employment are created by extraction and transportation of the basic commodities used in each ton of steel. The manufacturer who turns this steel into finished articles adds from six to fifty-eight hours, depending upon the product, fabricated structural pieces furnishing fifty-eight hours of employment per ton.



Monday, July 22.—Spent this afternoon with Samuel Yellin at his forge in West Philadelphia. I had heard for many years rumors of the treasures housed therein, but the reality is far more startling and worthy of study than even the most glowing rumors could have indicated. Here is a collection of iron work from all countries and from all periods as far back as the tenth or eleventh centuries, most of them gems of the ironworker's art, and reflecting each the individuality of its time and place. It is a collection of which any one of the great museums in the world might well be proud, for it seems unlikely that any one of them has assembled a collection anywhere near Mr. Yellin's in size or variety. When one considers the fact that iron work, after all, under the sort of care which it usually receives, is not exceedingly long-lived, the difficulty of assembling these treasures from all over the world looms up like the stupendous task it must have been. Mr. Yellin has been collecting these things for twenty-five or thirty years in his travels, and through correspondence with discriminating collectors and dealers in art objects. I wish I could have spent a week examining the collection rather than the few hours available today. There is one thing that even this hasty examination reveals, and that is the reason for the strong background of tradition and the knowledge of what has gone before which one finds forged into everything that Samuel Yellin makes.

Wednesday, July 24.—There is a curious and disturbing meeting of opposite currents in the present situation with regard to low-cost housing. On one side we are trying to build, at an acceptable rental, decent habitations with at least a minimum of the amen-

ities of life. On the other hand, we as a people have more or less suddenly become gadget-conscious, and are more and more coming to count real luxuries as mere necessities. It seems fairly evident—and Henry Wright points this out in his recent book, "Rehousing Urban America"—that it is unreasonable to expect to accomplish a double improvement at one jump. The tenant whose income is necessarily limited may be required to forego some of the comforts which have come to be considered essential in higher-rental apartments, such as unlimited hot water on tap, every modern kitchen gadget, and every room sizzling hot even if it is zero temperature outside. In a word, as we approach the possibility of bringing within the grasp of low-income groups a long-sought goal, that goal is snatched from our grasp by being suddenly enlarged and made more difficult of attainment than before.

Friday, July 26.—The hand of Georges Eugène Baron Haussmann, city planner in the reign of Napoleon III, is still at work in Paris. The Paris Municipal Council has discovered some uncompleted plans left by the Baron, and with the aid of the national government has made a beginning of improving parts of the ancient *cité*. Each improvement usually brings its offsetting accompaniments, however, and one which lovers of Paris will regret is the abolition of The Street of the Cat-which-Fishes.

Saturday, July 27.—The year 1935 may go down in history as The Year of the Model Home. One hears of them in process of design, construction, or exhibition, on every hand. Today they are opening to the public a \$12,000 model home in New Rochelle, which on September 21 may be yours if you are the holder of the lucky thirty-five-cent ticket.

Monday, July 29.—Arthur Upham Pope, who has devoted some years to the study of Persian art and archæology, is said to have found in Iran perfect examples of flying buttresses and ribbed vaults dating from a time when Gothic architecture in Europe was only in its infancy. On one building Mr. Pope is reported to have found a triple stalactite cornice dating from 1037—fifty years earlier than any other example of this form which became characteristic of Islamic architecture for many centuries thereafter.

Wednesday, July 31.—One will find some sound counsel in Vitruvius, and one will also find some chuckles—as for instance his dictum in Book I, Chapter 3, to the effect that there are three departments of architecture: the art of building, the making of time-pieces, and the construction of machinery.



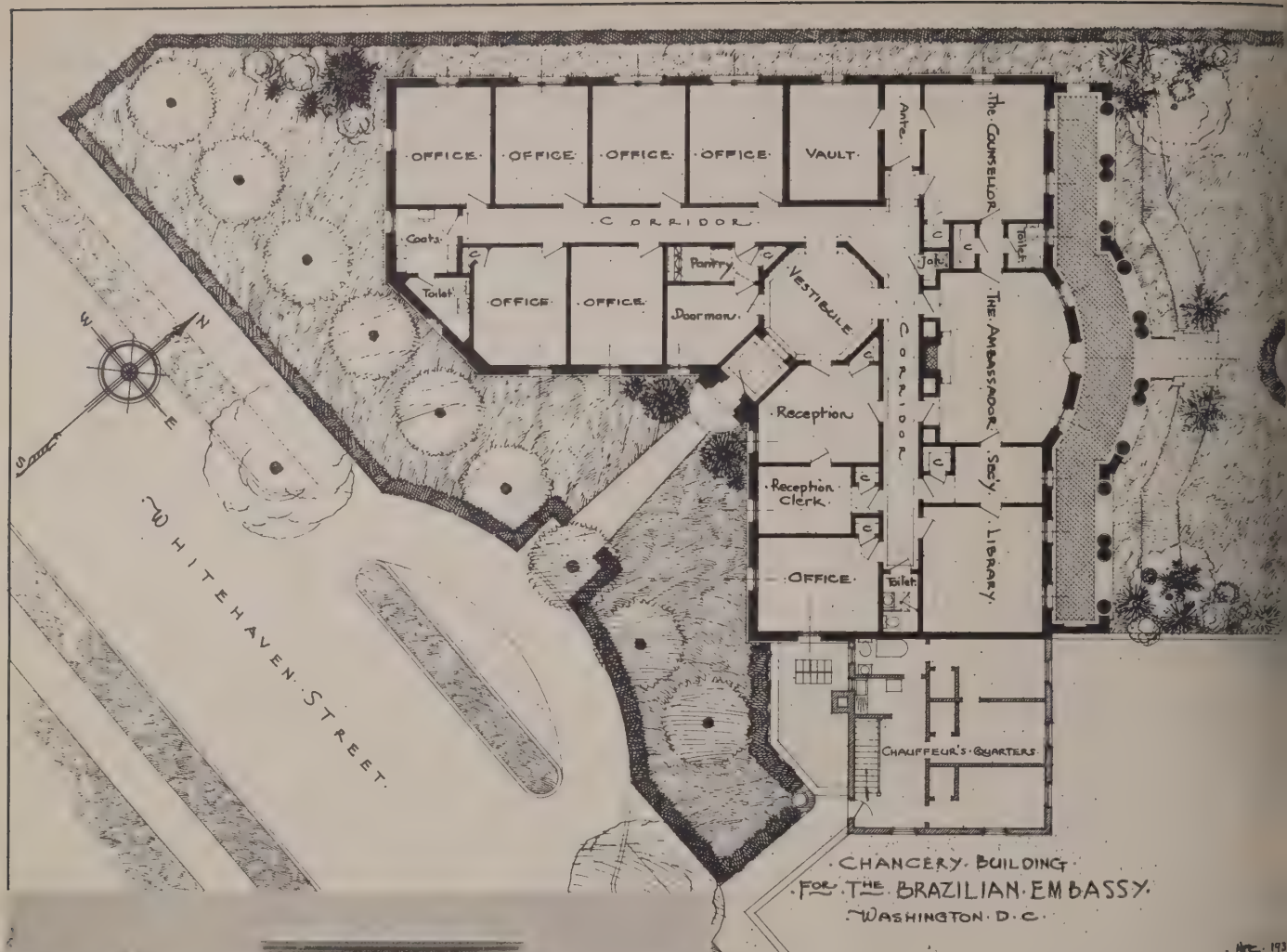
The walls are of stucco in a light buff with darker buff trim. This trim, also of stucco, is in a smooth finish, while the general field of the wall surfaces has a slight sand-floated texture. Window frames and staff beads are gray-blue, sash buff. The front door is dark green, with dark gray-blue frame and door trim

Photographs by Tom Scott of W. F. Roberts Co.

Chancery Building for the Brazilian Embassy, Washington, D. C.

HARRY FRANCIS CUNNINGHAM, ARCHITECT

« ARCHITECTURE »
SEPTEMBER, 1935



The shape of the plot dictated the general form of the plan, with its important rooms facing upon the garden at the rear

Capitals of the rusticated pilasters are derived from coffee and tobacco leaves, blossoms and berries. In the transom the star, symbol of Brazil, is in bronze

« ARCHITECTURE »
SEPTEMBER, 1935



The door under the pergola is the Ambassador's private entrance, reached from the embassy proper through the garden

A detail of the garden front



BOOK REVIEWS

MANUAL OF ACCOUNTING FOR ARCHITECTS. By The American Institute of Architects. 154 pages, 6 by 9 inches, with 38 plates. Standard Document No. 978. Washington, D. C.: 1935. \$5.

The new Standard Document of the A. I. A., prepared—although the volume in ultra modesty fails to admit it—by a committee under the able chairmanship of Edwin Bergstrom. The volume makes no pretense to invention, but frankly admits its dependence upon existing works relating to accounting—merely fitting the fundamental principles of the science to the architect's peculiar professional needs. The theory of accounting is concisely and clearly set forth, followed by schedules of accounts and plates representing bookkeeping forms, and these are devised for convenience and thorough accounting of either the small or large office.

DESIGN IN ART AND INDUSTRY. By ELY JACQUES KAHN. 204 pages, 7¾ by 10½ inches. Illustrations from photographs and drawings. New York: 1935: Charles Scribner's Sons. \$3.50.

Prompted by a discussion in the Committee on Education, A. I. A., Mr. Kahn went around the world with the particular purpose of finding out how the creative artist of today is being made, what he is producing, and how his products are sold. Throughout the interesting and widely varying observations runs the theme that art is learned by practising it rather than by listening to some one lecture about it. Apparently we, with all of our fancied pedagogic advances, have learned nothing that supplants the master-and-apprentice system. Here is a challenge and a signboard to those who are teaching art and those who would study it.

BEGINNING PROBLEMS IN MECHANICAL DRAWING. By CHARLES A. BENNETT. 92 pages, 6 by 9 inches. Illustrations from drawings. Pamphlet binding. Peoria, Ill.: 1935: The Manual Arts Press. 48 cents.

For grammar-school students, emphasizing the need for an understanding of the problem before the acquisition of skill in drawing.

THE BEAUTY OF BRITAIN. A Pictorial Survey. Introduced by J. B. PRIESTLY. Foreword by CHARLES BRADLEY FORD. 248 pages, 5 by 7¼ inches. Illustrations from photographs, with color frontispiece. Printed in Great Britain. New York: 1935: Charles Scribner's Sons. \$2.

The Briton has been a leader in devising new paths for the week-end traveller and bank-holiday adventurer. It is to this growing part of the public and to the flood of visitors from outside the Island that a group of able and experienced minds point out in these chapters some aspects of Britain's beauty that does not normally figure in the tourist's brochure. The illustrations are from superb photographs and there are over a hundred of them.

THE ARCHITECTURAL, STRUCTURAL, AND MONUMENTAL STONES OF MINNESOTA. By GEORGE A. THIEL and CARL E. DUTTON. 160 pages, 6¼ by 9 inches. Illustrations from maps, diagrams, and photographs in black-and-white and color. Minneapolis: 1935: The University of Minnesota Press. \$2.50.

STUDIES IN ILLUMINATION. IV. Daylight in Buildings. Public Health Bulletin No. 218. By JAMES E. IVES, FREDERICK L. KNOWLES, and LEWIS R. THOMPSON. 52 pages, 6 by 9¼ inches. Illustrations from photographs, diagrams, and graphs. Pamphlet binding. Washington: 1935: U. S. Treasury Department. 15 cents.

SWEDISH COOPERATIVE WHOLESALE SOCIETY'S ARCHITECTS' OFFICE. 148 pages, 8¼ by 11½ inches. Illustrations from photographs, some in color, and plans. Stockholm, Sweden: 1935: Kooperative Forbundet. \$2.50.

There is no close parallel in this country to the Co-operative Movement in Sweden. The foremost aim is to provide for its members foodstuffs and other necessities. With the growth of this movement, it became desirable to set up an organization architectural office for the design and remodelling of warehouses and store buildings. Some of the results of the architects' office efforts along these lines are shown in this volume.

THE PARISH CHURCHES OF ENGLAND. By J. CHARLES COX. Edited, with additional chapters, by CHARLES BRADLEY FORD. Foreword by W. R. INGE. 118 pages, 5½ by 8½ inches. Illustrations from photographs, plans and drawings, with color frontispiece. Printed in Great Britain. New York: 1935: Charles Scribner's Sons. \$2.75.

Dean Inge, who is not always rated as an optimist, admits that England "for about three months in the year is as lovely as any other land on earth." Moreover, the Dean says it does not matter much which counties the traveller may choose, he will find beautiful, quaint—and sometimes grand—churches everywhere inextricably woven into English history. The illustrations are superb, photographically and in reproduction.

SIX HISTORIC HOMESTEADS. By IMOGEN B. OAKLEY. 191 pages, 7 by 10 inches. Illustrated by THORNTON OAKLEY. Philadelphia: 1935: University of Pennsylvania Press. \$3.50.

The history of personalities and background concerning: the Moffatt-Ladd House, Portsmouth, N. H.; the Quincy Mansion, Braintree, Mass.; the Webb House, Wethersfield, Conn.; the Jumel House, New York; Stenton, near Philadelphia; and Mount Clare on the Chesapeake in Maryland. The illustrations are from bold pen drawings that convey atmosphere and general character rather than detail.

Yardley Wholesale Show Rooms

NEW YORK CITY

THE FIRM OF
ELY JACQUES KAHN

ARCHITECTS



Information desk and telephone exchange, entrance lobby

Photographs by Rolan

Looking from the entrance lobby into one of the wholesale show rooms. The door is panelled entirely in walnut, with the direction of the grain alternating in the checkerboard pattern. Hardware is in a dull silver finish



« ARCHITECTURE »
SEPTEMBER, 1935



Another of the showrooms is finished with white walls, cases, and ceiling, with a floor carpeted in deep rust color



A detail of one of the showrooms, in which the primavera and walnut contrast with the marble top of the display case and the carpet of deep rust color



In the white show room the upholstery is a deep rust color and the hangings are deep rose



Dependence is put upon the contrasting colors of the primavera and walnut on perfectly flat surfaces, rather than the differentiation of planes with moldings

« ARCHITECTURE »
SEPTEMBER, 1935



A detail of the white show room, in which the displayed merchandise counts strongly against the white background relieved by the upholstery and floor covering of deep rust color



Photographs

by Thompson

HOUSE OF LYLE BRUNER, KNOXVILLE, TENN.
BARBER & McMURRY, ARCHITECTS

"The Lyle Bruner residence embodies compactness and economy in plan, and simplicity in detail, but has some degree of refinement and elegance usually found only in more elaborate homes. It probably fits the particular requirements of its occupants as well as any small house we have done." —BARBER & McMURRY



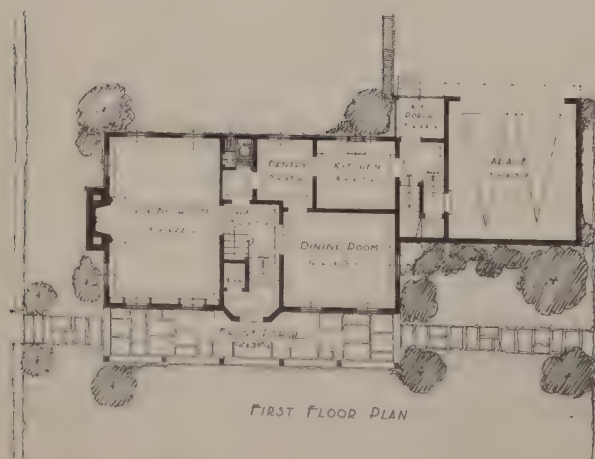
ONE HUNDRED SMALL HOUSES

◀ ARCHITECTURE ▶
SEPTEMBER, 1935



A corner of the living-room, the walls of which, like those of the other interiors, are papered

The walls are built of wood siding, the roof of slate, the porch floor of Crab Orchard flagstone laid directly on the earth



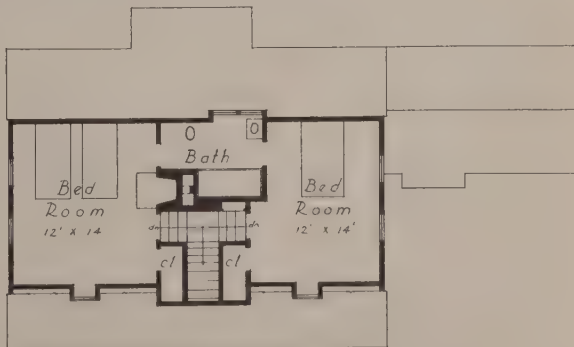
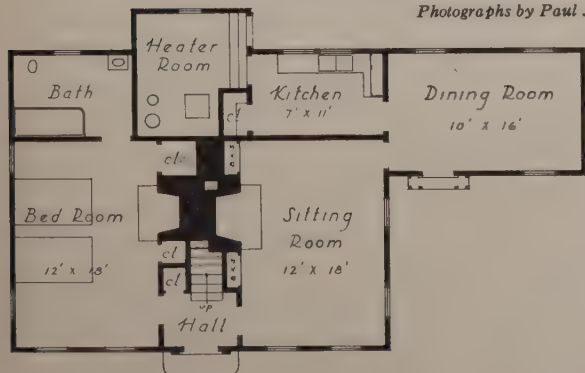


GUEST HOUSE OF CONSTANTINE HUTCHINS, NEEDHAM, MASS.
CHARLES S. KEEFE, ARCHITECT

"I like this house because it settles down and seems to belong just where it is. In such a simple building the effect depends upon the form of the building itself, for there is nothing else to help it if this is not right."
—CHARLES S. KEEFE

The plan is a flexible one. If the first floor of the main part only is finished, one has three rooms and a bath to start with; thereafter, one bedroom and a bath may be finished upstairs; then the other bedroom; and last of all, the dining-room wing may be added. This is but one of several sequences through which the plan may grow

Photographs by Paul J. Weber



ONE HUNDRED SMALL HOUSES

« ARCHITECTURE »
SEPTEMBER, 1935



The roof is of cedar shingles, with walls of hand-split cypress shingles, all left to weather. Trim is white, with dark green shutters

In the living-room the walls and panelling are painted a dark greenish blue, with hangings of white chintz with pink flowers. Wide spruce boards for the floor are painted a dark brown





Architectural forms are of the simplest, in keeping with the New England flavor of the house. The hardware throughout is wrought iron

« ARCHITECTURE »
SEPTEMBER, 1935

COMPETITION, as a means of selecting architects for public buildings, has its critics and its enthusiastic advocates, and neither group remains mute for very long periods. Both groups have entered upon new activities in connection with our national program of increased public works construction as an aid to economic recovery.

The advocates of architectural competition stress the unassailable fairness of the principle in conjunction with a democratic form of government, and its efficacy in bringing new talent into action. The critics, in the architectural ranks at least, stress the inherent waste involved in the duplication of study and presentation of drawings.

Influenced, undoubtedly, by both of these contentions, the Southern California Chapter of the American Institute of Architects has been working upon the development of a new code—a code of competition for the selection of architects on public works. Its authors have no conviction that they have attained perfection in this instrument. Rather, it is offered for discussion, criticism and improvement.

FORM OF COMPETITION FOR THE SELECTION OF ARCHITECTS FOR THE DESIGN OF PUBLIC BUILDINGS

A. General:

1. The form of competition for the selection of architects for public work, as outlined herein, would be under the general direction of the Southern California Chapter of the American Institute of Architects in conjunction with such other committees or individuals as may be appointed by the Owner.

B. Supervising Architect:

1. The Supervising Architect shall be selected by the Owner from a list of three (3) names which in turn have been nominated and approved by the Southern California Chapter of the American Institute of Architects and the State Association of California Architects, Southern Section.

2. In addition to the Supervising Architect, an Advisory Board shall be appointed consisting of four (4) architects whose function will be to act in an advisory capacity to the Supervising Architect. The Southern California Chapter of the American Institute of Architects and the State Association of California Architects, Southern Section, shall each submit three (3) names to the

Competition for Public Works

Owner and from the list of six (6) thus submitted, he shall select four (4) which shall form the Advisory Board.

3. The work of the Supervising Architect* shall consist, in general, of the following:

- a. Preparation of programs of competition.
- b. Checking and approval of all legal documents.
- c. Checking and approval of all plans and specifications.
- d. General supervisory administration of the work.

4. The work of the Supervising Architect and the Advisory Board† shall consist, in general, of the following:

- a. Preparation of qualification forms for distribution to applicants.
- b. The approval of applicants for competition through the medium of prequalification standards for each competition.

C. Competitors:

1. Any certified practising architect may submit his application and, if approved by the Advisory Board, may enter the competition.

2. The Advisory Board may require the association of two or more firms for competitions exceeding a certain amount of cost. Any architect may be qualified on a particular project (even if not qualified individually) provided he associates with an architect properly qualified for the work.

3. The decision of the Advisory Board will be final in regard to the eligibility of all applicants for the competition.

D. Program Requirements:

1. Programs of competition shall be written in such a way as to assure the minimum amount of elaborate draftsmanship on the part of

* The Supervising Architect takes the place of the Professional Advisor in former competition programs, and he is to be paid by the Owner a fee commensurate with his services.

† The Advisory Board serves without remuneration.

the competitors, and the time allowed for the actual preparation of competition drawings shall be limited to a period of from five days to two weeks, depending upon the size and scope of the project.

E. Jury:

1. The jury shall consist of one (1) member of each competing group elected by that group as its representative.

2. The jury shall inspect all the drawings and vote upon the various designs until the successful competitor has been selected.

a. Method of vote shall be by "point ballot"; i.e., each jury member shall vote upon all designs submitted, placing same in the order of his choice and giving his first choice number 1, his second choice number 2, etc., until the list is complete. To determine the judgment, the point values shall be added. Where twelve (12) or more entries are voted on, the highest half of the entries are to be eliminated on the first ballot. On the second ballot only those jury members shall vote whose designs remain after the first elimination. On the final ballot that design having the low point total shall be declared the winner. If in the opinion of the professional advisor the number of entries is so great as to justify additional balloting, he shall so direct and balloting shall proceed as outlined.

3. In addition to the winning design, the jury shall designate the designs placed second and third.

F. Appointment of the Architect:

1. The successful competitor or group, upon recommendation of the design jury, shall be appointed by the Owner as the architect for the project.

2. The successful competitor must associate with himself one or more architects who have been approved by the Advisory Board for each \$500,000 of the cost of the proposed building. However, the maximum number of architects thus associated shall not exceed five (5).

3. Upon appointment, the Architect and his associates shall proceed with the preparation of such additional sketches as may be required to further develop the project, and, upon the approval of such preliminary studies, proceed with the completion of the working drawings, specifications and contract under the direction of the Supervising Architect.

NUMBER 107 IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS
ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

ARCHITECTURE'S PORTFOLIO OF CHIMNEY OFFSETS

*Subjects of previous portfolios are listed below
at left and right of page*

❖ 1926
DORMER WINDOWS
SHUTTERS AND BLINDS

❖ 1927
ENGLISH PANELLING
GEORGIAN STAIRWAYS
STONE MASONRY TEXTURES
ENGLISH CHIMNEYS
FANLIGHTS AND OVERDOORS
TEXTURES OF BRICKWORK
IRON RAILINGS
DOOR HARDWARE
PALLADIAN MOTIVES
GABLE ENDS
COLONIAL TOP-RAILINGS
CIRCULAR AND OVAL WINDOWS

❖ 1928
BUILT-IN BOOKCASES
CHIMNEY TOPS
DOOR HOODS
BAY WINDOWS
CUPOLAS
GARDEN GATES
STAIR ENDS
BALCONIES
GARDEN WALLS
ARCADES
PLASTER CEILINGS
CORNICES OF WOOD

❖ 1929
DOORWAY LIGHTING
ENGLISH FIREPLACES
GATE-POST TOPS
GARDEN STEPS
RAIN LEADER HEADS
GARDEN POOLS
QUOINS
INTERIOR PAVING
BELT COURSES
KEYSTONES
AIDS TO FENESTRATION
BALUSTRADES

❖ 1930
SPANDRELS
CHANCEL FURNITURE
BUSINESS BUILDING ENTRANCES
GARDEN SHELTERS
ELEVATOR DOORS
ENTRANCE PORCHES
PATIOS
TREILLAGE
FLAGPOLE HOLDERS
CASEMENT WINDOWS
FENCES OF WOOD
GOTHIC DOORWAYS

❖ 1931
BANKING-ROOM CHECK DESKS
SECOND-STORY PORCHES
TOWER CLOCKS



*Below are the subjects of
forthcoming Portfolios*

Window Heads
(EXTERIOR, ARCHED)
OCTOBER

Unusual Brickwork
NOVEMBER

Shutters and Blinds
DECEMBER

Fireplaces
(MEDITERRANEAN TYPES)
JANUARY

Pediments
FEBRUARY

Balcony Railings
(INTERIOR)
MARCH

*Photographs showing interesting
examples under any of these head-
ings will be welcomed by the Edi-
tor, though it should be noted that
these respective issues are made up
about six weeks in advance of
publication date.*

1931—Continued

ALTARS
GARAGE DOORS
MAIL-CHUTE BOXES
WEATHER-VANES
BANK ENTRANCES
URNS
WINDOW GRILLES
CHINA CUPBOARDS
PARAPETS

1932 ❖
RADIATOR ENCLOSURES
INTERIOR CLOCKS
OUTSIDE STAIRWAYS
LEADED GLASS MEDALLIONS
EXTERIOR DOORS OF WOOD
METAL FENCES
HANGING SIGNS
WOOD CEILINGS
MARQUISES
WALL SHEATHING
FRENCH STONEMWORK
OVER-MANTEL TREATMENTS

1933 ❖
BANK SCREENS
INTERIOR DOORS
METAL STAIR RAILINGS
VERANDAS
THE EAGLE IN SCULPTURE
EAVES RETURNS ON MASONRY
GABLES
EXTERIOR LETTERING
ENTRANCE DRIVEWAYS
CORBELS
PEW ENDS
GOTHIC NICHERS
CURTAIN TREATMENT AT
WINDOWS

1934 ❖
EXTERIOR PLASTERWORK
CHURCH DOORS
FOUNTAINS
MODERN ORNAMENT
RUSTICATION
ORGAN CASES
GARDEN FURNITURE
WINDOW HEADS, EXTERIOR
SPIRES
BUSINESS BUILDING LOBBIES
ROOF TRUSSES
MODERN LIGHTING FIXTURES

1935 ❖
CIRCULAR WINDOWS,
GOTHIC AND ROMANESQUE
TILE ROOFS
MOLDED BRICK
DORMER WINDOWS
ENTRANCE SEATS
OVERDOORS, INTERIOR
BRICK CORNICES
SIGNS



Plainfield, N. J.



*Teaneck Manor, N. J.
Frederick T. Warner*

*Syracuse, N. Y.
Dwight James Baum*



*Southampton, N. Y.
Peabody, Wilson & Brown*





*Freeport, N. Y.
Dwight James Baum*



*Bala, Pa.
Folsom, Staunton & Graham*

*Syracuse, N. Y.
Dwight James Baum*



*Ithaca, N. Y.
LeRoy P. Burnham*





*Chicago, Ill.
Walcott & Work*



*Ithaca, N. Y.
LeRoy P. Burnham*

*Cincinnati, Ohio
Charles F. Cellarius*



*Cincinnati, Ohio
Charles F. Cellarius*





*Fieldston, N. Y.
Dwight James Baum*



*Cambridge, Mass.
Howe, Manning & Almy*

*Southampton, N. Y.
Office of John Russell Pope*

*East Hampton, N. Y.
Aymar Embury II*





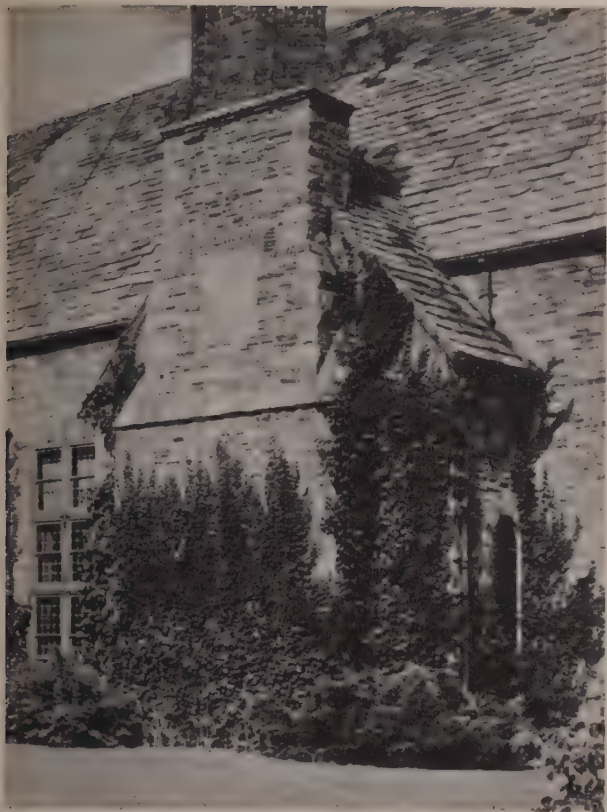
*Cincinnati, Ohio
Dwight James Baum*



*Larchmont, N. Y.
Office of John Russell Pope*



*Cleveland, Ohio
Meade & Hamilton*



Maplewood, N. J.
Office of John Russell Pope

Tuxedo, N. Y.
Office of John Russell Pope



Orange, N. Y.
Clifford C. Wendehack



*Western Subedge (c. 1640),
Gloucestershire*



*Great Neck, N. Y.
LeRoy P. Ward*

*Orange, N. J.
Clifford C. Wendehack*

*Port Washington, N. Y.
Wesley Sherwood Bessell*





*Greenwich, Conn.
Frank J. Forster; R. A. Gallimore*



*Felsted,
England*

*Beverly Hills, Calif.
Allen G. Siple*

*Earl's Colny,
Essex, England*





*Kansas City, Mo.
Edward Buehler Delk*

*San Antonio, Tex.
Adams & Adams*

*Schenectady, N. Y.
Beverly S. King*





*Glens Falls, N. Y.
Tooker & Marsh*

*Ithaca, N. Y.
LeRoy P. Burnham*



*Montclair, N. J.
Clifford C. Wendehack*



*Detroit, Mich.
Richard H. Marr*



*New Canaan, Conn.
Alfred Mausolf*

*Swarthmore, Pa.
Walter T. Karcher & Livingston Smith*





*Scarsdale, N. Y.
Andrew J. Thomas*

*Hackensack, N. J.
Wesley Sherwood Bessell*



*Great Neck, N. Y.
LeRoy P. Ward*





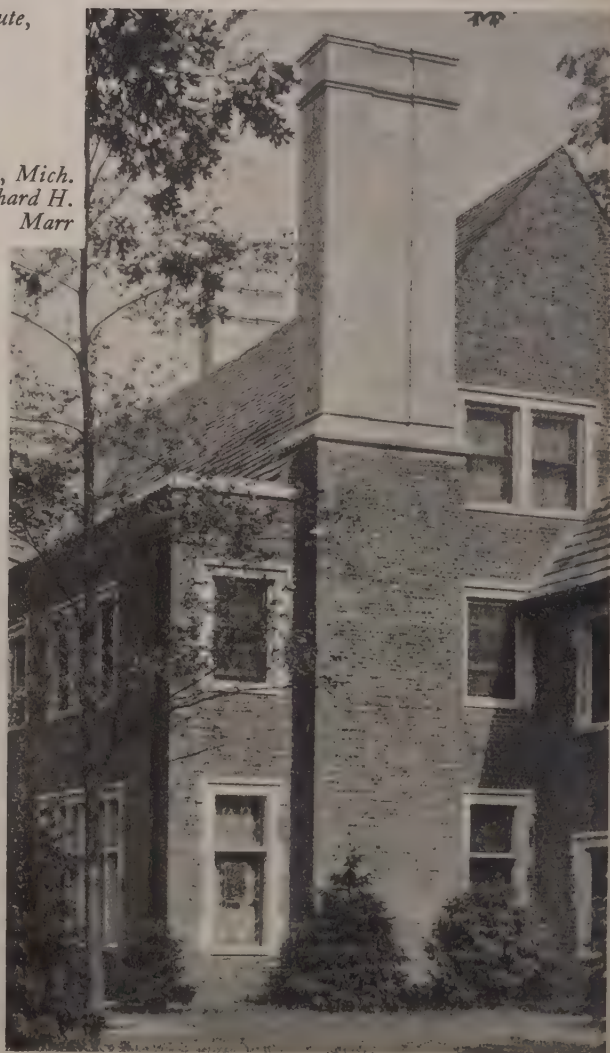
*Huntington,
N. Y.
Bertram G.
Goodhue*

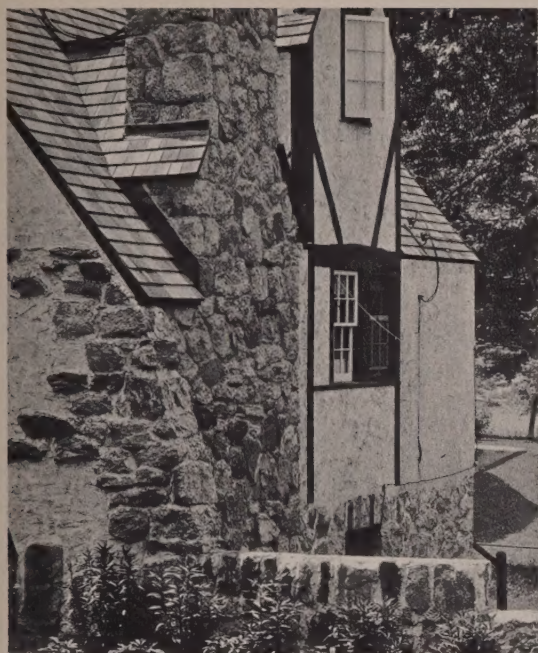
*Bronxville,
N. Y.
Lewis
Bowman*



*Terre Haute,
Ind.
Miller &
Yeager*

*Detroit, Mich.
Richard H.
Marr*





*Detroit, Mich.
Richard H.
Marr*

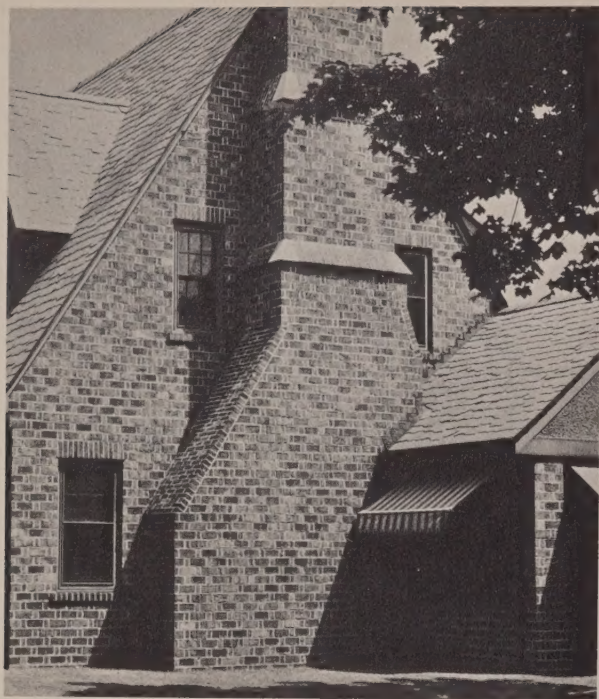
*Pelham,
N. Y.*



*Bronxville,
N. Y.
Perry M.
Duncan;
C. Cabell
Garrett*

*Detroit, Mich.
Richard H.
Marr*





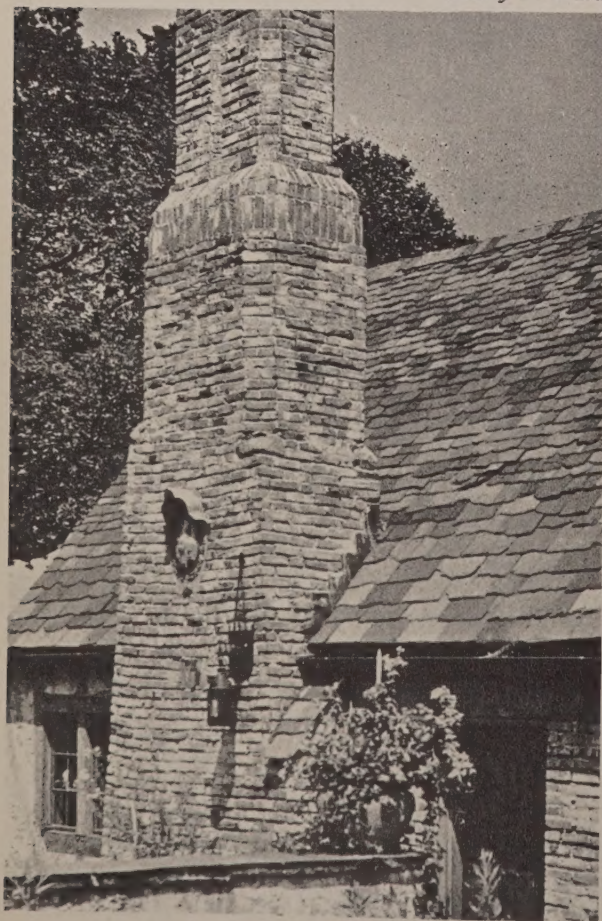
*Garden City, N. Y.
Harry Grady*



*Ardsley-on-Hudson, N. Y.
Clinton Mackenzie*

*Great Neck, N. Y.
LeRoy P. Ward*

*Cleveland, Ohio
Meade & Hamilton*





IN THE GARDEN OF LUDWIG NOBEL, BÅSTAD, SWEDEN
From the water-color by J. Floyd Yewell

« ARCHITECTURE »
OCTOBER 1935